THE

Chicago Medical Journal.

A MONTHLY RECORD OF

Medicine, Surgery, and the Collateral Sciences.

EDITED BY J. ADAMS ALLEN, M.D., LL.D.; AND WALTER HAY, M.D.

VOL. XXVII. — JULY, 1870. — No. 7.

Original Communications.

ARTICLE I. — *A Uterine Polypus of Eighteen Years Growth Successfully Removed.* By J. W. BROOKS, M.D., Chicago.

On March 28th, 1870, I was requested to visit and examine Mrs. ——, recently from St. P——, who gave me her history as follows: Age 52 years; married at 17 years; enjoyed uninterrupted good health from birth up to 1850, and prior to that time bore one child, now living. Early in 1850 she conceived again and without apparent cause miscarried, at the fourth month of gestation. Her general health continued good, but from this time the monthly molimen was markedly increased. In 1852 she again conceived, and miscarried at the fourth month.

From this period her health was impaired from repeated hæmorrhages, both at the month and during the interval. Four months from the last miscarriage a polypus, recently removed, came down during a hæmorrhage and presented at the vulva, occasionally interrupting the flow of urine. She was under the care of

various medical gentlemen, scarce two agreeing as to the nature of the malady. About 1856 she visited Chicago for medical advice.

One gentleman gave no opinion; another, under whose care she was placed, pronounced it "the worst case of prolapsus uteri he had ever seen." She returned to her home after four months of treatment. At this time she plead for the removal of "the thing," as she called it, but no one approved of an attempt, and for twelve more years she continued to suffer from prostrating hæmorrhages, often confined to her bed for weeks, in consequence thereof. In 1866 the catamenia ceased. In December, 1869, after a copious and protracted hæmorrhage, she came again to Chicago, to seek further professional aid, and was examined by several members of the medical profession, who gave divers opinions. One. that it was an ossified tumor; another, that it was a fibrous tumor, involving the uterus, and, perhaps, appendices, etc., etc. She had not been able to urinate or defecate for years, except as she pressed up the polypus, and for twenty years had not been free from pain through the hips and in the lower part of the back.

After this relation the writer proceeded to investigate. The vulva were separated by an apparent fibrous body. Following that body with the index finger, a constriction was found about four inches from the external point, and at this place the great diagnostic difficulty was encountered, for above this the whole vagina was roofed over with the adventitious growth. Seizing it by the constricted portion, and drawing it downwards and backwards, I was able to carry the index finger under the arch of the pubes, and upward, until a rounded edge of a cup-shaped cavity (resembling an inverted toadstool) was reached. Carrying the end of the finger over this edge and drawing it downward, not less than one and a half gills of muco-purulent matter was emptied out, and this enabled me, as I thought, to enter a uterine sound within the cavity of the uterus, an inch or more, and felt sure the growth was attached to the inner, posterior and middle part of that organ. Subsequent examinations confirmed me in the opinion, and my friend Dr. Skeer, who was present at the last examination, coincided with me. I now gave to the patient the opinion that it was a uterine polypus, and thought it could be removed without very great danger to life. She instantly asked when I would do

it, and the 14th of April was fixed for the operation. On the day named, assisted by Dr. Skeer, I protected a wire ecraseur with a gum catheter slipped over it, and carried the same, thus guarded, up to the constriction, on the posterior part of the polypus, and, by careful manipulation, was able to carry it over the flange and slip it into the cup, making careful and constant traction, and pressing with the finger, until it passed below the os uteri, around the pedicle in the bottom of the cup, then removing the catheter from the ecraseur, the ends of the wire were entered into the fenestra at the end of an ecraseur staff (a plate of which staff, with a spring chain, can be seen in the CHICAGO MEDICAL JOURNAL for June, 1867, and was first used in a case there narrated), the arch of the staff being carried under the pubes, upward and backward, until it reached the pedicle, when the wire was fastened to the slide, firmly, the loop of the ecraseur being nearly at a right angle with the staff. The polypus was soon removed, and with little pain attending the operation. The next difficulty was the removal of the polypus from the vagina, which required my full strength to bring the upper part through the vulva. The hæmorrhage for the moment was profuse, but a sponge saturated with a mixture of one part of Squibb's Perchlorid Ferri, and two parts of water, was placed directly over the bleeding vessels and soon checked it. A "T" bandage was snugly applied, and one-fourth of a grain of morphine was given with some brandy. She passed a comfortable night, and no unpleasant symptom followed. From the second day after the operation the vagina was washed out twice, daily, with a solution of Hyposulphite of Soda in Aqua Rosæ, for about two weeks.

The dimensions of this amorphous polypus, after the blood was removed, were as follows: Circumference, below the constriction, twelve inches; circumference at the constriction, nine inches; circumference above the constriction, eighteen inches; circumference, longitudinally, more than twenty inches. Weight, after the removal of the blood, one pound ten ounces. Estimated weight of blood removed, four ounces. The sinuses in the polypus were very large, and the structure was strictly fibrous. The shape was cylindroid from the lower part to and just above the constriction. From thence it was a reflex growth upwards and outwards in all directions, spreading like a flange over the crest of the pubes, linea ilio

pectinea and promontory of the sacrum, forming a cup-shaped cavity, in the bottom of which a short pedicle, one and one-fourth inches in diameter, was found. In the cavity depended the uterus, surrounded by the adventitious growth. The expanded os and cervix uteri were drawn into the bottom of the cup. Herein consisted the difficulty in forming a correct diagnosis, and led a professional gentlemen of high standing to regard it as a fibroid disease of the walls of the uterus. On the ninth day after the operation, an examination with a speculum showed the parts healthy, and the os uteri contracting.

The lady at this writing, May 30th, 1870, is in perfect health. The polypus is preserved, at my office, 55 South Clark street, and any one desiring, can see it.

ARTICLE II. — *Clinical Experiences in Private Practice; from a Physical Basis of Life.* By Z. C. McELROY, M.D., Zanesville, Ohio.

Albert Patterson, aged 12 years; comfortably housed, clothed and fed; goes to school during the day, and serves a carrier's route on a daily evening paper; returned from school, Wednesday afternoon, 30th March, 1870, and complained to his mother that his head ached, and that he felt tired. She noticed that his face was flushed, but attributed both to a cold. He, however, served his carrier's route that and each succeeding evening during the week. On Sabbath he was, if anything, worse, and seemed reluctant to go to sabbath school; but a few cheering words from his mother induced him to go. At sunday school he was very dizzy, and thought many times he would have to lie down, but managed to stay till school was dismissed. He reached home only with the greatest difficulty, was very dizzy, tired and weak, and went to bed immediately. His mother bathed his feet in hot mustard water, and as they were still cold, placed hot irons to them in bed. As he was no better on Monday, his mother packed him in a sheet, wet with warm water, during the forenoon, for the purpose, as she said, of breaking up his cold. He was in the wet sheet

about an hour and a half, and on taking him out, his mother made an attempt to wash him all over, with hot water, in which she had dissolved some washing soda, but he became very sick, had a sinking spell, and she thought he would have convulsions. She rubbed him with warm flannel, and hastily put him to bed. He now became delirious all the time, and his hands and feet could not be kept warm.

Such is the mother's statement of his condition previous to my first visit, 6½ o'clock, P. M., Monday, 4th April, 1870. Skin cold, purplish, and clammy; pulseless at both wrists; just below the axilla, on the inside of the arm, the pulse counted 180; pupils dilated; temperature 107; shallow, rapid, and sighing breathing. Could get no response to questions, either by myself or his mother. He was in fact, and to all intents and purposes, in articulo mortis. In my first, and necessarily hurried investigation of Albert's case, no effort was made to connect the phenomena with the name of any disease, nor were any questions asked of the parents, in regard to probable causes. Fully recognizing that there are but three possible processes in any living body, viz: increased motion in the interest of repair, or waste; decreased motion in the interest of repair, or waste; and changing forms; no difficulty was encountered in getting at what was actually taking place in little Albert's body, without coupling the pathological condition with any name for his condition, which was that motion in the interest of repair was wholly suspended, while motion in the interest of decay, or waste, was proceeding at a velocity only co-incident with changes in the molecular forms, or structure of his tissues, with retention of the results of tissue metamorphosis. The indications for remedial management were to retard motion, eliminate effete matter, and change the chemical nature of the virus, or poison, so-called, or rather the mode of force engaged in changing the molecular forms of the tissues.

Impressed by the imperfect circulation of his blood, that there was a large deficiency of water in his body, it was decided to flood it with water, the effect of which would be a probable return of the circulation to the extremities, possibly some of it would be returned by vomiting, but the greater part would find exit through the kidneys, carrying with it some of the results of tissue metamorphosis, and would certainly open the way for more efficient

elimination by all the avenues through which effete matter is passed from the body. In his unconscious condition this was no easy task, as all he would probably do would be to resist its introduction. A pitcher of warm water and tumbler were brought to me, and, aided by his mother and sister, and a resolute neighbor lady, some eight or ten tumblersfull were passed down his throat, and to the whole proceeding he made all the resistance in his power. To a looker-on the process of compelling the child to swallow that which, apparently, he did not want, would appear an unnecessary and cruel proceeding with a dying boy. But the stake was a large one—a life to be won or lost in a very few hours. At the conclusion, when he was laid down, the pulse had returned, as anticipated, in considerable volume, at his wrists. But his extremities were still cold, and requesting warm irons to be placed to his feet and legs, he was left for a couple of hours.

At 9½ P. M. found Albert very restless, pulse small and thready at wrists, and flitting at 180 per minute; he had not vomited any; his temperature was not ascertained. Half an ounce of Chlorate Potassa was dissolved in one pint of water, patient to have a wineglassfull every two hours till gone. Requesting his mother to have him placed on the vessel and asked to pass water, at least every two hours, and to keep warmth to his feet, he was left for the night. Before leaving the house the mother and family were informed of his desperate condition, and that though he would probably die during the night, it was my desire that she should resolutely compel him to swallow the Chlorate solution, and not to omit anything she was requested to do, for it was barely possible that his youth and the treatment might carry him through the crisis.

On my way home, my mind, of course, dwelt on his case. Here was a little boy at the very verge of death, due, in the technical language of the profession, most likely, to some poison or virus. Scarlet fever, so-called, had been lingeringly prevailing in our community, for the past year, and the phenomena presented by little Albert impressed me with the idea that he was being overwhelmed by the so-called scarlet fever poison. The temperature indicated a rapidity of molecular changes incompatible with the maintenance of the normal molecular forms of the tissues for many hours; and as he had only ordinary evacuations from either

bladder or bowels since the commencement of his illness, his body was loaded down with the results of tissue decay; and his immediate danger was, therefore, from so-called uraemic poisoning, which, in language which will give rise to correct mental impressions, is not simply urea, or urine retained in the blood, but the total results of tissue metamorphosis, less the gaseous products escaping at his lungs.

All organic poisons, so-called, produce their effects in living bodies by changing the molecular forms of the tissues; and any organic compound, solid, or fluid, or gaseous, which does not modify, or change tissue forms, is as innocent as milk, or water itself. And all organic poisons, so-called, but more properly form-changers, originate from the retrograde metamorphosis of animal tissues, or other complex organic compounds. Poison, organic poison, originates in decay, and is symbolical of decay. Living beings, more particularly those eating flesh, or concentrated food, have no greater enemies in nature than the results of the decay of their own tissues. The herbivora less so, but still more or less dangerous. The flesh-eating lower animals, for the most part, cover their excrement with earth.

But in reference to little Albert, with something over two quarts of water recently introduced into his body, with what he will get during the night, holding the Chlorate of Potassa in solution, elimination can hardly fail to be active during the latter part of the night, it seems to me he has had given to him the best chance for his life known to the practitioner's art.

5½ A. M. Patient much the same as at last visit last night; perhaps more restless, as he does not lie still five seconds at a time, the jactitation is extreme. Has consumed the whole pint of Chlorate Potassa solution, and his mother, fearing that he had lost some, had made another solution, one-half of which had been given. Had passed urine several times during the night, but has no pulse at the wrists; skin cold, clammy, and purplish; pupils widely dilated; temperature 106. Determined, if possible, to retard the velocity of tissue waste, and to bring on a critical elimination, gave ten drops Fluid Extract Veratrum Viride, to be repeated every hour till my return. Determined, also, to give him every possible chance for his life, the injection of liquor ammonia into one of his veins, was the next step resolved on. A neighboring physician was

called on to assist, but not finding him at home, the matter was unavoidably postponed till after breakfast.

8 o'clock, A. M., 5th April. Albert has had three doses Veratrum; the pulse had fallen to 84 per minute, and could now be felt at the wrists; temperature 103; very restless; bowels discharging involuntarily in bed. In consultation, the case was considered hopeless, and as the pulse had fallen, the injection of liquor ammonia was deferred, for the reasons that to get at a vein, a wound must be made, and as the proceeding was unusual, in case of his death, there might be censure. The consulting physician stumbled me no little by stating that he thought his lungs were so much congested as not to permit the air to enter. Hastily returning to the patient, they were examined, but found entirely free, and the air entering all parts of them. The consulting physician also objected to Veratrum, on account, as he said, of its depressing effects. I suggested Chloral Hydrat, to which assent was given, and a two ounce solution, with drachm of Chloral, prescribed, and sent for; and a tablespoonfull to be given every hour till restlessness was controlled. A flax-seed cataplasm, with one-eighth ground mustard, was prescribed, to cover his chest, and a mustard poultice, alone, to nape of neck. He is also to have brandy and milk forced down his throat. A previous engagement for this day would prevent my seeing Albert again till evening, the consulting physician was to call at noon. He found he had vomited very freely, and had passed a good deal of urine and feces in bed, and was much more calm. The Veratrum was resumed in small doses every hour.

5 o'clock, P. M. Temperature 103½; pulse 120; much better. He sleeps some now, and begins to demand fluids. He is to have solution Chlorate Potassa during the night, and bread and milk, if he will take it.

6th April, 8 o'clock, A. M. Has slept some; is quite rational; passes urine freely; temperature 102½; pulse 120. Is considered convalescent; to have food, and, in the afternoon, Rochelle Salts, to move his bowels.

A report reaches the family that one of the little carrier boys, while waiting for their papers, Saturday afternoon, at the printing office, had some wintergreen leaves, or, as he called it, mountain tea, which he gave to the other boys; that Albert had taken some, and on tasting them said they were very bitter, and it

was soon ascertained that they were Laurel leaves. (Kalmia Latifolia). But Albert, who is now entirely rational, says he did not taste any, nor had he any at any time in his possession. He remembers that there was a boy who had some mountain tea, but he did not give him any; and persists in saying so to the present time. The symptoms of Laurel poisoning would hardly be delayed so long, and besides, they indicate that Laurel only retards motion, but does not change forms, so that his statement that he did not eat any is probably correct. He does not now remember anything after returning from sunday school.

7th April, 9 o'clock, A. M. Has slept a good deal, and is still improving. Says he feels weak, but has no pain, and takes considerable food. Pulse 120; temperature 102½. Bowels not having moved, he is to have solution of Epsom Salts, this forenoon, and all the food he will take.

5 P. M. Bowels have moved freely; temperature 103½; pulse 120. To have Chlorate Potassa solution during the night.

8th April, 9 A. M. Very much better again this morning; enjoys his food; passes water freely, but has a temperature of 102½, with pulse 116. As motion in the interest of repair is fully active, nothing to be done to retard the rate of waste in progress, as shown by the thermometer.

9th, A. M. Still improving, eats well, sleeps well; wants to be dressed and set up to-day, and is permitted to do so. Temperature 102; pulse 116.

The further progress of the case presented only this special feature, that for ten or twelve days next succeeding, his temperature and pulse, whenever ascertained, and that was only once a day, or on alternate days, was never below 102, and 114. Had the process of repair been less active, this would have occasioned some anxiety; but as motion was equally active in the interests of both repair and waste, no interference was made by remedial agents. In ten or twelve days he resumed his duties on the carrier's route, and calling at my office occasionally, his temperature and pulse were never found below 102 and 110.

It still seems to me, Albert was poisoned, in professional technology; that the greater part of his body had undergone such changes of molecular forms, by some mode of force, probably that of so-called scarlet fever, as to render it unfit for the evolution of

the normal phenomena of life. But it matters very little in the professional management of his case, what particular mode of force it was; as the result and management would have been the same. The pathological fact was, that when first seen, motion in the interest of repair was wholly suspended; and the rate of waste was rapidly hastening him down to death. In looking backwards at the case, it would appear as probable that flooding his system with warm water, the Chlorate Potassa, and Veratrum Viride, were the agents which turned the tide of his life. The Chloral Hydrat was certainly inert, and he owes his life to the thorough elimination, mainly brought about by the water and Chlorate Potassa, and the sudden check of motion in the interest of waste, by the Veratrum. The five or six drachms of Chlorate of Potassa given the first night may seem large, and it was large, but none too large, for it seems to me the results justify the means to the end attained. Each of these agents was employed with definite conceptions of the processes and ends to be accomplished; and from beginning to end, there was no doubt or hesitation, save the little jolt due to the consultation.

The management of this case may be taken as an example of therapeutics from a physical basis of life, and can hardly fail to commend itself to practitioners most indifferent to "new theories," as they term them, in reference to pathology and therapeutics as well as physiology.*

ARTICLE III.—*Treatment of Conjunctivitis Neonatorum.* By E. L. HOLMES, M. D., Professor of Ophthalmology and Otology, in Rush Medical College, and Surgeon to the Chicago Charitable Eye and Ear Infirmary.

(Read before the Illinois State Medical Society.)

There are two methods of treating conjunctivitis of new-born infants, each recommended more or less urgently by different authorities.

By one plan, very weak solutions of the ordinary astringents are injected or instilled under the lids at short intervals.

* See Chicago Medical Journal, January, 1870.

By the second plan, a much stronger caustic astringent is applied to the palpebral conjunctiva—the portion especially affected—once, or, in unusually severe cases, twice daily.

Not wishing to dwell upon the nature and causes of the disease, I will simply state that it is, without doubt, in by far the larger portion of cases, simply a catarrhal conjunctivitis.

Infection, either from leucorrhœal or, especially, gonorrhœal discharge in the vagina of the mother, must be regarded as a less frequent cause than many have supposed.

A certain diagnosis in reference to the cause of the disease, is almost absolutely impossible, in consequence of the very great tendency of simple catarrhal conjunctivitis in infants to assume strictly a purulent form.

The treatment, therefore, must be based upon the character and amount of the discharge from the eyes, rather than upon the cause of the inflammation.

This inflammation, if not early arrested, is exceedingly liable to become in the highest degree purulent. This marked tendency to purulent discharge, seems to depend upon some condition of the conjunctiva peculiar to infancy; perhaps no more readily explained than the fact that the iris in infancy is less susceptible than that of adults.

The point, to which I ask especial attention at this time, is in reference to the difficulty of ensuring a suitable application of mild remedies in violent forms of inflammation.

It is undoubtedly true that so long as there is a little swelling, and the discharge contains scarcely any muco-purulent matter, the frequent application of weak solutions may be entrusted to the nurse.

However competent this method may be even in severe cases, it must be remembered that frequency and thoroughness of the applications are the conditions on which success depends.

The fear, on the part of mothers and nurses, of causing pain and crying, in very many, if not in almost all, instances, prevents the thorough application of these remedies. It is well known that the simple act of holding the head and opening the eyes causes an infant to cry violently.

Physicians in the country and usually those in the city are unable to visit an infant more than once or twice daily. In addition

to the inefficient manner in which the remedies are too often employed, there is danger of injury to the eye in introducing the point of the syringe. Moreover, there is danger not altogether small that the stream from the syringe may accidentally carry purulent matter from the patient to the eye of the attendant.

For the past eight or ten years I have invariably employed in severe cases the second plan I mentioned, which consists in making an application, once or at most twice daily, of a strong caustic astringent.

In nearly all the cases which I am called to treat, either in my own practice or in consultation, the disease has continued a week or more with great swelling and discharge.

The application is made in the following manner: after the palpebral conjunctiva has been as extensively exposed as possible, and thoroughly cleansed from moisture by gently pressing upon the inflamed surface a soft piece of linen, quite a large camel's hair brush, merely moistened with a solution of argent. nit., gr. x.–xx. to the ounce, is lightly passed over the conjunctiva.

Great precaution should be taken that the solution is applied to as much of the conjunctiva as possible, and in such a manner that it shall not flow over the cornea. The eyes should be gently cleansed almost every hour with tepid water.

Ulceration or even sloughing of the cornea do not contraindicate the use of the applications above described.

It should be remembered, however, that the indiscriminate use of strong caustics instilled between the lids, cannot be too earnestly deprecated.

The obstetrician, undoubtedly, meets with more of these cases in the early stages than the oculist, and relieves many patients by the very mildest means, when they are thoroughly applied by experienced nurses. The number of such cases, however, which are finally referred to the oculist, must be an evidence that such treatment is very often either in itself inefficient, or almost of necessity improperly applied.

It is not the object of this paper to discuss the treatment necessary in serious complications, but simply to remove from the mind of the general practitioner all fear regarding the use of strong caustic solutions (argent. nit.) in infantile conjunctivitis, provided they are applied in minute quantities equally distributed over the whole surface.

ARTICLE IV.—*Miscellaneous Practice.* By F. B. NORCOM, A.M., M. D.

(Reported by CHARLES CALDWELL, M. D.)

TRAUMATIC PERITONITIS.

CASE 1st. John R., æt. 17, sanguine temperament, and very healthy always, was wounded, May 26th, 1868, by the accidental discharge of a pistol, the ball entering the abdomen three inches to the right of the median line, and two below the plane of the umbilicus. Passing directly backwards it lodged beneath the integument, just three inches to right of spinal column. The accident happening near the Cook County Hospital, Dr. Root was summoned, who took the young man home, and attended him,—dressing the wound, giving full dose morphine, and doing all in his power to relieve his painful condition.

Dr. Norcom, the family physician, arrived at 3 o'clock P. M. and took charge of the case. The shock following the injury was almost a collapse. There was a discharge from the wound of blood and some dark looking fluid, which both Drs. Root and Norcom thought came from the ascending colon; and as he had considerable vomiting, the proof became more positive that the bowel had been injured. Dr. N., after a careful analysis of the case, concluded that his best chance for recovery lay in the full exhibition of opium, carried if necessary to narcotism; and under his directions ½ gr. morphine was given, the pulse being 120, respiration 40, with acute pain in bowels, and ¼ gr. every hour until its influence could be seen, which about 10 P. M. became apparent, as both pulse and respiration began to fall gradually.

Throughout the night he rested tranquilly, his urine being drawn off 10 P. M. and 8 A. M., 27th, when the respiration had fallen to 17 and pulse 110, and throughout the day the opiate was given every three hours, holding the respiration between 16 and 20, the pulse keeping an average of 110.

About 10 P. M., being somewhat nauseated, he vomited, or rather regurgitated four or five ounces of a dark green bilious looking fluid, for which small pieces of ice were given, and as about this time symptoms of exhaustion were being rapidly developed, brandy was ordered every three hours throughout the

night, and the hot fomentations of hops assiduously applied, to relieve tenderness and tympanitic distention.

The decubitus was on right side, with abdomen partially resting on the bed, in such a position as to approximate the wounds of abdominal wall and injured bowel, to prevent the escape of fluids in the cavity, and to facilitate soon as possible adhesion, and this position was maintained until inflammation had in a measure subsided. The first 24 hours the abdominal muscles were very rigid, but as distention increased they became more relaxed. On 27th and 28th the abdomen was very much distended, and tender all over from pressure; on the 29th, however, it began to diminish, when the existence of effusion became manifest; and on the morning of the 30th the pain was limited to a space of 3 or 4 inches diameter surrounding entrance of ball, where by this time adhesions were rapidly forming. Early on 31st had very acute pain in track of colon, due probably to distention from flatus, or the passage of hard fæcal matter, which was speedily allayed by warm opiate and aconite fomentations, though during the following night the tympanitis was greater than ever before.

To this date the urine had to be drawn every 12 hours, when he began to regain power, and passed it himself. The opiate treatment had been steadily pursued, with beef-tea and such quantities of brandy as the necessities of the case demanded; but, at end of this day—31st—a sudden change took place, the pulse running up to 140, very feeble and thready, while the respiration fell to 11 per minute and very irregular,—breathing three times in six seconds, with intermission of nine, and as he appeared to be sinking rapidly, brandy was given *ad libitum*, for his extremities were cold and shriveled, and his face bloodless and pinched.

The relatives and friends, supposing him dying, came to utter their farewells, though he lay quiet and lethargic, nor could hardly be aroused by questions put to him; but the stimulant treatment was pushed, and after a few hours the color began to return to his face, the extremities to grow warm, and his rallying became as sudden as his sinking had been.

Having gone to dinner, being absent about one hour and a half, was surprised upon my return to see the sudden change for the better, the pulse falling rapidly to 126, and respiration rising to 16. The mother, during my absence, being very anxious, was

imprudent enough to tell him he could never recover, but his courage and hope were proof against such predictions, and he expressed a determination to live through this ordeal, and he did so.

The disease had now reached its acme in the morning, when he came so near slipping through our fingers, and we had now nothing to fear, unless a relapse from imprudence, or the supervention of some such unhappy accident as diarrhœa, vomiting, hiccough, etc., etc. Treatment now gr.$\frac{1}{6}$ morphine every three hours; chicken broth or beef tea; corn starch; milk, etc. Pulse fell quite fast, being, 10 P. M., 106, respiration 18, regular, and sleep unbroken and refreshing during the night. At 7 A. M. pulse 100, respiration 18, and says he feels so well. Saw him again at noon, and was doing finely, but was called in haste at 4 P. M. to find him in great pain, with pulse 100, and respiration 28. This condition seemed to come from an effort on his part to arise from the bed and pass water, during the temporary absence of his mother, and he now feels as if there was to be a change. Lies on his back, with knees drawn up; severe pain in track of colon, and is restless and uneasy. Gave gr.$\frac{1}{4}$ morphine, and at 5.30 P. M. pulse 100, respiration 22; at 6.30 repeated the dose, and at 8 P. M. was asleep, pulse 96, respiration 20. About 11, vomited slightly, and about 12 o'clock, 1st June, pulse 96, respiration 20, perspiring freely, and his breathing slowly falling to 16 by 2.30 A. M., with some occasional vomiting, though accompanied by no pain. From this time he improved slowly, with little vomiting, while at 9 P. M. pulse stood 84, respiration 18, and he now passed for the first time a small purely fœcal stool.

A few weeks later, the ball was extracted by simple incision, and the patient is in the enjoyment of full health.

The record of this case has been little altered, except some slight pruning and condensation, for which I know my friend, the Doctor, will pardon me. The patient undoubtedly owes his life to the skillful and judicious management of Dr. Caldwell; and I can say that, throughout the whole sickness, my own services as consulting physician were of little account, and that everything necessary to meet the emergencies was promptly furnished by this accomplished physician.

During the late war, very many gun-shot wounds of the abdo-

men were presented for treatment, many including wounds of the large and small intestines; and though, of course, the mortality was great, yet a number of lives were saved—where indeed the chances seemed desperate—by the free use of opium, sustaining with liquid nourishment, and the judicious exhibition of alcoholic liquors. In the same way, penetrating wounds of the chest, especially when the lungs were involved, and attended by severe hæmorrhage, were treated by opium, or its alkaloid, and with beneficial results. For those two large classes of inflammatory affections—serous membranes, and mucous and cutaneous surfaces, the latter two of an erysipelatous character — there exists no remedy that for one moment can compare with it; and in that peculiar condition of the muco-serous lining of the smaller bronchial tubes and air vesicles—bronchitis—known as occurring in such blood diseases as erysipelas, rheumatism, gout, etc., it becomes *par excellence* our sheet anchor; especially, too, if combined with quinine, colchicum, and the ordinary auxiliaries of a sustaining treatment. Witness those attacks of iritis occurring in the later stages of continued fevers, and see how rapidly the effused lymph will disappear under the tonic influence of quinine and small doses of opium, when mercury would be useless to save sight, even if it did not destroy the patient. Again, in those pericardial and endocardial complications following acute rheumatism, especially in younger life, and generally showing themselves the first week —not so very frequent, I grant—observe how certainly they will be controlled by large doses of opium and quinine (*vide* Todd) assisted of course by repeated counter-irritation, and a nourishing dietary. And again, when gout may attack the stomach, giving rise to such acute distress from gaseous accumulation; or the heart, with its frightful intermissions; and ever producing dangerous meningeal irritation, can any drug be found like opium to meet the expectations of the practitioner?

You will not think, Mr. Editor, that there is too much enthusiasm displayed in thus speaking on some of our favorite themes; remember, I do not ride hobbies, as I consider such an infatuation fair evidence of a badly balanced mind; but I am a firm believer that, if this "God-given" drug were taken from us, more than half of our usefulness to the human race would be lost. Our most potent remedies are found in such drugs as act directly on

the nervous system,—such as opium, quinine, aconite, digitalis, *et hoc omne genus*,—and hence it is undoubted that our best advances must be in the direction of neuro-pathology. We know that the vaso-motor system of nerves controls the supply of blood, and thus directly affects nutrition; and hence in all inflammatory diseases, where there is dilatation of the blood vessels, whether considered as the primary stage, or simply as a necessary accompaniment to increased cell growth (Virchow,) we necessarily resort to those remedies which, acting upon the sympathetic system, create contraction of those vessels, (Wilkes). Now the remedies above mentioned act in this manner, and few physicians there are who have not observed the remarkable effects of quinine (not antiperiodic) in certain stages of fever; of the action of that blessed anti-inflammatory drug, opium, in the acute diseases of the chest and abdomen; of the manner in which aconite and digitalis control the circulation, thus cutting short in a few hours many diseases, which, if allowed to go on uncontrolled, would, from their severity, cause long periods of confinement, if they did not eventually destroy life.

ALPHOS CIRCINATUS. (Syn: *Psoriasis Vulgaris.*)

CASE 2nd. Mr. H——; æt. 30 years; sanguine temperament, with strongly marked strumous tendencies; unmarried; and lawyer by profession. Habits always regular, never addicted to use of liquor or tobacco. Has been visited by no diseases, not even those incidental to childhood, until the occurrence of his present ailment, which first showed itself in his seventh year. It began to appear at this age just above the ankles, on the fibular surface of both lower extremities in the fall of 1847, and disappeared the following spring and summer, when the functions of the skin became more active.

From that date to June 24th, 1868, when he applied to me, the eruption had been gradually spreading, creeping slowly upwards, involving the abdomen and trunk, the upper extremities, and lastly scalp and face. Up to 1859, it had generally left him through the warm months, the disappearance, however, being each succeeding year less marked, but from this date it took firm hold, and exhibited itself persistently, despite every method of treatment

pursued. He states that he was prescribed for by many physicians, sometimes with alleviation, but at others the eruption would return with extreme aggravation.

His digestive system, soon after the first appearance, began to show some derangement, the food seemed to oppress him, giving not only uneasiness, but at times intense pain, paroxysmal and so acute as to double him up like attacks of colic, and then his nutrition became impaired, he began to lose flesh, and his mind so perturbed, that, like most dyspeptics, he grew into absolute hypochondriasis.

His antecedent history is the same as in most of such cases, beginning by a few tubercles capped by the ordinary scale; clusters beginning to develop, fusing into circular masses, then these aggregating into irregular patches upon a slightly elevated dull red base, well marked about the knees and elbows, and attended by the usual itching and desquamation. When he visited me for advice, June 24th, 1868, he was pretty well flecked *à capitè ad calcem*, the eruption perfectly characteristic of the guttated variety on the limbs and body, but so aggregated in patches about the joints of elbow and knee, as to have lost its definite circular outline in a great measure, though not exactly diffuse, with raised borders and depressed centers, and well covered with those imbricated scales of morbid epithelium. The scalp was suffering, the hair being filled with the cast off dèbris, and the forehead and cheeks variegated with many small circular and oval spots of the pityriasic variety. The pruritus was not intense, nor was there at this period any aggravation from such intercurrent visitors as erythema or eczema. Though his general health appeared fair, yet his face and condition indicated nutritive and nervous debility; tongue furred, his digestion pointed to defective gastric secretion; bowels somewhat costive; appetite capricious; and the concomitant mental disturbance sufficient to make him unhappy; to retire him, on account of his facial disfigurement, from society; and, not being in love with Chicago associations, to make him hate his species; and not to be wondered at in any man, no matter how healthy, who is engaged in business in this God-forsaken place.

Recognizing the case in all its bearings, I began treatment by regulating his bowels; assisting the digestion by my favorite combination of Gentian, Nux Vomica, Bismuth, and a small amount of

Morphia; and at meals the arsenio-ferruginous mixture of Wilson. His hair was cut close, the shampoo bath several times a week, with Juniper tar soap; the scalp well rubbed with a white precipitate ointment diluted with glycerine, as also those portions of the eruption where dryness formed a prominent feature, and his dietary limited to nutritious and easily digested substances. Under this judicious treatment, *me judice*, he began to improve slowly but surely, the eruption to clear up from center to periphery of each mass; the morbid epithelial secretion to cease; the pruritus to become less; the digestion to strengthen, with increasing desire for food; and his mental distress so much relieved, that he blessed the day he had applied to me, and I think he was right. About the following January, having passed through a cold snap, and having failed to pursue the treatment as rigorously as advised,—though at this time his skin was well cleaned, as also his face, except some few melasmic stains,—he again fell back, and the disease began to gain ground, and his digestion to again sympathize. Knowing that one's system may become habituated to a certain course of remedies, and that their therapeutical action may become more or less inert, I changed to the acid solution of arsenic (*de Valangin*), reinstated the baths, and ordered a very generous dietary. These measures were faithfully adhered to until the next Autumn, with almost complete disappearance of the affection; a thorough restitution of his gastric functions, and his skin became as pure and healthy as a new born baby's,—barring a few small patches about the joints. And yet, with all this improvement, secured by such protracted treatment, we can hardly hope for a permanent cure, inasmuch as his hereditary proclivities are too direct, and are constantly being lighted up and perpetuated by a too well marked strumous diathesis.

It is an accepted fact, and established by clinical observation, that arsenic is the remedy—almost a specific—in the treatment of the Squamæ. It is a neuro-tonic acting upon the peripheral plexus of nerves, a suspender of waste, and a vital assistant to blood-making. As alphous affections arise from a diathesis, it is to be inferred that, in its administration we desire an alterative effect, and hence give small doses for a long period; at the same time knowing that they are accompanied—even though the patient may be apparently healthy—by great defects of nutrition and

sanguification, we combine iron and such nervines as may enhance its own inherent virtues.

The case we have presented exhibits several points of interest; the first, the occurrence of the disease at the early age of seven years, when, as a rule, it is most apt to attack after puberty, or even in middle life, when growth has ceased, and waste often runs ahead of repair; again, its transmission from the paternal grand-father, neither his father, nor any of his brothers or sisters showing the least symptom; and lastly, after existing twenty-one years, how rapidly it improved, and was held in check by treatment. The differential diagnosis is not difficult, as only the tubercular syphiloderma can be mistaken for it. In the latter, the previous history will inform us of certain groups of specific symptoms; the eruption lacks symmetrical diffusion; it is not found around the articulations; and though its duration may be chronic, yet alphos exceeds all known cutaneous affections for chronicity. It is recommended by Wilson—one of the best authorities—to give arsenic in small doses to secure the alterative and tonic effect, but never to push the drug so as to produce constitutional irritation, and to keep up the remedy for months, or years should the necessities of the case demand. He rarely gives more than four or five minims of Fowler's Solution three times a day, or double that number of Valangin's Solution, and if he notices any symptoms of saturation,—or cumulative action (?)—he suspends at once. Arsenic has been tested by myself in a great number of such affections, but I must confess to having never obtained in cases of long standing any remarkable curative effects, until I had induced systemic saturation; the zonal congestive bands of conjunctivæ; perhaps muscular prostration, with nausea and colic; and in certain instances, sub-cutaneous effusion of lids, face, hands, etc. The remedy thus showing its irritative action, I merely lower the dose, say one-third, and soon as possible raise it again to as high a point as the system will bear, of course cautiously and gradually, watching my patient with closest observation. This is my own experience, with most of the arsenical preparations, and it can be safely said, that when the smaller doses—five to six minims—of the Liquor Potassæ Arsenitis produce no effect, given for weeks and months, that by increasing *one* minim every *two* or *three* days, until *ten* or *fifteen* are taken, a most decided improvement

will begin to appear; and in no instance have I witnessed any poisonous or deleterious action, nor been obliged to suspend—even though the dose had to be lowered—its administration.

ACUTE DYSENTERY.

CASE 3rd. Mr. F——; æt. 34; married; nervo-bilious temperament; mason by occupation; and resident of Chicago seven years. Never suffered from any serious disease before. Habits are regular, and is very temperate, both as to the use of liquors or tobacco. Was taken ill Oct. 27th, 1869, and without assignable cause. Came home in the afternoon, feeling very chilly and weak; without appetite; some degree of feverishness; pains in the limbs, back, and abdomen; and throughout the night had several loose diarrhœal discharges. Next day, the 28th, being worse, the discharges becoming more frequent, accompanied by increased abdominal pain and tenderness, called in a physician. A purgative was immediately administered, to be followed by Dover's powder; with proper fomentations to belly; absolute rest in bed; demulcent drinks; and unirritating diet. Despite this judicious treatment, the discharges continued, streaked with blood, and now entirely of a mucous character; while a most distressing nausea and tenesmus came on; great disgust for anything by the mouth; increased tenderness of abdomen by palpation; marked prostration and despondency of mind; and a decided icterode shade of the surface.

On the 2nd Nov., having dismissed his attending physician—a very common occurrence among that class of Irish—he was persuaded by some friend to send for me, and I found him with a pulse 116, very weak and compressible; respiration 28; skin jaundiced and clammy—a condition so happily expressed by the French *poissonneuse;* tongue heavily coated with teeth indentations; abdominal tenderness and distension; much nausea; discharges frequent, scanty, with blood and pus; and decided muscular prostration. Recognizing that his former attendant had done all in his power to control these lesions, and that his treatment had been conducted properly and scientifically; I was obliged either to follow in his footsteps — *secundem artem*, — or to adopt a mode of management used in the extreme Southern States, where dysen-

tery, in the warm months, becomes so prevalent, and either as an endemic or epidemic disorder, at times fearfully fatal.

So, as a *dernier réssort*, he was ordered the infusion of the root of Ipecacuanha, as follows: 2 drachms of the root broken in small fragments, and infused in one pint boiling water, allowed to boil for a few moments, then cooled, and the supernatant fluid poured off, of which one-quarter (4 oz.) was given every fifteen minutes, until the whole was taken; at the same time warm fomentations to the abdomen continued, and absolute rest in the horizontal posture. Of course the most violent emesis ensued, continuing off and on for several hours, assisted by warm drinks and teas, and as soon as this had ceased, iced milk with lime-water was allowed, and at night a full dose of Battley's Sedative. He rested very fairly this night; only two slight discharges, and next morning his condition was improved, though there was still pain and tenderness, with a slight percentage of blood in the last stool, passed just before my morning visit. Upon the same pieces of the root twelve ounces of boiling water were poured, and, after cooling, one-fourth given as in the first instance, and though creating some little nausea and vomiting, it began acting—as it always does—on the bowels, bringing away profuse bilious discharges.

After a few hours the febrile excitement (asthenic) had lessened; the pulse down to 90, softer and fuller; the pain and tenderness almost gone; tongue cleaner; and a ravenous desire for food—this latter a very important sign, and almost pathognomonic of speedy recovery.

He was now permitted cool farinaceous diet; iced milk; warm applications persisted in; and this night 12 grs. Dover's powder, there having been but one small passage since 3 o'clock, P. M., unattended by pain or straining, and no admixture of blood. After this evening no other medication was used; his diet simply regulated; rest still in bed enjoined; and a stimulating camphorated liniment applied to belly, covered by single layer of flannel, to guard against changes of temperature.

On the 6th he was allowed some meat broths, and a moderate amount of claret wine, and simply cautioned against excesses to prevent relapse.

This case is presented simply to call attention to another manner of administering Ipecacuanha in dysenteric diseases, and

which has been in vogue many years in the extreme South, where the worst forms and most fatal of this terrible disease exist, and which appears about as near a specific as any treatment ever attained in any class of disorders known, not even excepting the malariæ controlled by the alkaloid of the Jesuit's bark. I am well aware that several modes of administering this drug in the same disease have been brought before the profession, have had their advocates, and been sustained by a long list of remarkable recoveries; yet permit me to remark, that I have tried most of them, and can find nothing for one moment to compare with that above detailed. Of course it is unnecessary, especially in these northern climates, to resort to it in the great majority of cases, most of which may be readily controlled by the usual treatment—opiate, astringent, or otherwise; but in those cases where such remedies fail to respond, and where the patient is succumbing to the violence of the disease, it offers at least one more hold, and if employed fearlessly and vigorously will not disappoint the practitioner. It can be used for children, as well as adults, of course modifying the dose and quantity; and even among sucklings, where there seemed few hopes of recovery, life has been saved.

It is the same treatment as that employed in Martinique, the "Leeward Islands," and tropical latitudes generally, and was introduced into Louisiana by a French physician during the Spanish *régime*, and has become so popular, and so well appreciated that, on the large estates, the planters, taking time by the forelock, have all their cases well in hand before the attending physician can see them. During the occupation of Louisiana, when the provost camps were established in the "coast country," the Federal soldiers would indulge in green corn, unripe fruits and sugar cane, shrimps, fish, etc., washing down such complex messes with commissariat, or fighting whisky, and as was to be expected, few escaped violent attacks of bloody flux. As I had charge of one large camp—part of 31st Mass. regiment—this treatment was invariably inaugurated, and though it rather astonished the strangers to be put through such an apparently violent course of medication, yet, with one exception, and that the result of neglect and carelessness, not one single death occurred, while eight miles below, where many were ill with the same complaint, they were carted out by the score to their last resting place in the bosom of mother earth.

I am sure many a poor fellow, who was "sick unto the death," and who expected to leave his bones in that "far away distant land of the orange and myrtle," often thanks his stars, and as often thinks of the rebel doctor—so they termed me—who sat beside him administering a most awful puking, and trying to console and philosophize with him, while he was expecting every moment to be turned inside out, and throw up his very boots—figuratively speaking; and, at the same time, so great a reputation for success had this treatment obtained, that many came in later days (when they could secure furloughs), even from other parts, to be cured of their sub-acute and chronic varieties, for which it was hardly admissible.

And now, as to the *rationale* of treatment, or the *modus operandi* of this drug, I have not one word to say, leaving the whole to the wisdom and philosophical reasonings of the many readers of the JOURNAL; whether they will not place such effects, in part, to the known properties of ipecacuanha in controlling inordinate and abnormal mucous secretions; or whether due to rapid and forcible elimination through emesis. I only give the facts, gleaned from a large experience—and a happy one too—and at the same time must confess that, throughout, the treatment can in no way be called otherwise than empirical.

ARTICLE V.—*Clinical Lecture.* Delivered at St. Luke's Hospital. By JNO. E. OWENS, M. D., Surgeon to the Hospital (*Thrombosis and Aphasia.*)

John W. Wilson, æt. 32, born in England, a book-keeper, was admitted September 29th, with a simple diarrhœa, with which he was attacked two or three days before admission, and which yielded in 24 hours after the administration of pills, consisting of Acetate of Lead, grs.ii, Powd. Opium, gr.j. I saw him on Sunday morning, when he commenced taking the pills. On Monday morning he took the fourth pill, and the diarrhœa being checked, the medicine was discontinued. With the exception of a very slight debility in consequence of his indisposition, he felt very well and comfortable, and would have been discharged on Tuesday, had he not been attacked, on Monday evening, with a pain in the lower part of the

right leg and the corresponding foot. This, with marked symptoms of lowered vitality, rapidly increased, until mortification set in. The heart and lungs sounds were natural.

Friday, Oct. 5th. The greater part of the foot was of a dark purple color, indeed, in some places it was almost black. At this time the late Prof. Brainard was good enough to see the case with me.

Sunday, Oct. 7th. I received a note from the hospital, saying that the patient had not spoken for an hour. At six o'clock in the morning, he called the nurse and asked him if he intended to get up soon. A few minutes afterwards, the nurse, upon going to the ward, found that the patient mumbled his words so much, he could not make himself understood. Upon calling about 10½ o'clock, A. M., I found that he had a partial paralysis of motion and of sensation of the right side. He could roll the arm very slightly. The left corner of the mouth was drawn towards the corresponding side; he was unable to move the tongue in any direction; the pupils were normal; the skin was in good condition; the pulse 90, heart and lung sounds natural, and appetite good.

Monday, Oct. 8th. There is tenderness over the large arteries, in the arms and legs; the paralysis is decreasing; the patient thrusts out the tongue, and, with some difficulty, moves it from side to side; the left corner of the mouth is no longer drawn to one side; the arm and leg are very feeble. Although he can now use several words, he is unable generally to communicate his ideas. He managed to say, "That'll do." The bowels have twice moved, in response to Pil Cathart Comp. Up to this time, the patient has been taking 30 drops of the following mixture:—Tr. Ferri Chlorid ℥j, Quiniæ Sulph. grs.xxx, three or four times, daily; anodynes in the shape of Ext. Hyoscyami; from 3 to 6 grs., or Morphiæ Sulph. gr.ss., repeated pro re nata; egg-nog, and the most nourishing food.

Tuesday, Oct. 9th. Urine normal; has very good motion of the right arm and leg; heart sounds normal; temperature of two sides of the body about the same.

Wednesday, Oct. 10th. Leg tense, mortification extending; pulse 96. For the last three days, the answer to almost every question has been, "Yes, yes, yes," whether it was a proper answer to the question or not. When restless, the following pill was given:—Morphiæ Sulph. gr.ss., Gum Camph. grs.jj.

Thursday, Oct. 11th. Had a chill this morning; pulse 119; appetite not quite so good; treatment continued.

Tuesday, Oct. 16th. Chill in the evening; ordered additional Whisky, Quiniæ Sulph. grs.jjj, every three hours, Sulphite of Lime, grs.x, in milk, every hour or two, with Morphiæ Sulph. at night; appetite poor.

Thursday, Oct. 18th. Mortification extending; pulse 96. The patient knows his age, (32), but when asked he can only say, "Thir," and shows vexation from his inability to answer perfectly. He was, you'll remember, born in England, and when I told him that he was born in France, he said, "No, no." The Quinine pills were discontinued, and the mixture of Iron and Quinine substituted.

Friday, Oct. 19th. Had a chill this morning; pulse 150; appetite failing; in other respects the same. Friday evening, pulse 96.

Saturday, Oct. 20th. The double-flap operation was performed above the knee. After the operation we gave the patient Morphiæ Sulph. gr.i., Gum Camphoræ, grs.ij.

Sunday, Oct. 21st. He rallied very well yesterday, from the operation; but did not sleep till about four o'clock this morning; pulse 130 and feeble, hands cold and clammy. Prescribed egg-nog, beef tea, soft-boiled eggs, and ℥ss. three or four times daily, of the following: Tr. Ferri Chlor. ʒiij., Quiniæ Sulph. ʒss., Sacch. Alb. ʒij., Aquæ ℥vj. et ʒv. The patient has slept a good deal since four o'clock. The nose looks pinched; face is much thinner, since yesterday.

Monday, Oct. 22nd. Patient continued to sink since yesterday, and died at 1½ P. M.

GENTLEMEN: At our last meeting, so much time was taken up with the operation, that we were obliged to defer, till to-day, our comments upon this very important and interesting case. Had the patient been a man of advanced age, or had he been a rheumatic or gouty subject, or excessively debilitated from long continued wasting disease, the condition under which he labored, and which has terminated so fatally, would have lost much of its rarity, and our knowledge of its pathology might have been more satisfactory. But when we consider that the history of this case does not point to any of the above conditions,—that he was splendidly developed and well nourished, we must look for other and more

insidious causes, and congratulate humanity, that, at least, some of our most fatal diseases may make most extensive ravages, and entail upon us comparatively little suffering. Our patient seems to have had, throughout, only about three days of real suffering. Let us, once more, glance at the symptoms presented by this case, together with its history, and see how far a consideration of them may lead us to a correct diagnosis. The diarrhœa, I think, we may set aside, as having no bearing upon the case whatever.

On Monday evening, Oct. 1st, the patient was attacked with a pain in the leg and foot. This pain came suddenly and was tolerably severe, during the evening and night. On Tuesday when I saw him it had increased, so that anodynes were necessary to allay it. The foot and lower part of the leg presented a dusky appearance, the temperature was much lowered, and the blood coursed very sluggishly and lazily through the veins on the dorsum of the foot. When a part is about to undergo the process of mortification, there is generally an aggravation of all the previous symptoms. The pain and sensibility become more intolerable, the dusky hue changes to a mottled appearance, the tension becomes greater, and here and there blisters arise, which contain serum more or less tinged with the coloring matter of the blood. Now, gentlemen, when a limb presents this appearance, its nature is unmistakable, and unless the cause can be promptly removed, the death of the entire part is inevitable. It may be well, here, to mention a case illustrative of the fact that a part, presenting the appearance just described, may return to its normal condition, if the cause be promptly removed. For the facts of the case, I am indebted to Prof. Andrews. From some cause, which I do not now remember, an arm became enormously swollen. The tension was so great, that pressure upon the arteries of the limb, so interfered with the nutrition of the part, by cutting off the circulation, that mortification was about to commence, or indeed, if I remember correctly, it had in some parts of the limb already taken place. The part was of a dark purple, cold and blistered. Free incisions into the limb promptly removed the cause, the circulation became re-established, and the process of mortification stopped. So by the timely action of the experienced surgeon, a limb was saved—indeed, perhaps the patient's life. Physicians may boast of their alteratives, but it has been said that none of them are equal to the scalpel.

The complete cessation of vitality is denoted by a purple or black appearance of the part, the absence of all heat and sensibility, and a peculiar fetid odor. In general, there is more or less crepitation upon pressure, but in this case I could not detect any. The constitutional disturbance, which is generally of a typhoid character, was in this case very slight. The pulse, which usually in such cases runs up to 140 or 160, except on two or three occasions, and then only for a short time after the chills, did not go above 96.

But, gentlemen, were you called to a case of this kind early, what would be the nature of your examination of the part? In the first place, you must inquire whether the pain, which came on so suddenly in the leg, exists in any other part of the body. You find that it does not. It is not likely, then, that you have rheumatism to deal with. Taking in the general appearance of the leg, you will, either at your first or your second visit, notice the dusky color of the foot and more or less of the leg. You press upon the surface and find that the blood, which has been displaced by the pressure, returns but very slowly and lazily to the spot, and in the same manner does the blood course through the veins upon the dorsum of the foot. Having now taken note of the pain, and the character of the local circulation, your attention must be directed to the temperature. The toes, and perhaps the whole foot, are quite cold. The part will likely pit on pressure. You will at once determine from this condition of sluggish circulation, lowered temperature, and pitting on pressure, that the vitality of the part is very much lowered. Now when the vitality of a part is excessively depreciated, the part may die. Your attention would then be directed to the arteries through which the limb receives nourishment. These vessels you may examine very easily, if there is not much swelling. The arteries to be examined in the foot are the dorsalis pedis, midway between the two malleoli, and the posterior tibial, where it passes, immediately behind the internal malleolus.

Gentlemen, if you find the above condition existing, and no pulsation in these arteries, there is not the shadow of a doubt as to the nature of the case. You have diagnosed, then, approaching mortification, and if you are a young man, just at this point, although you may thoroughly understand the nature of the case, you will have a consultation. The prognosis in such cases is unfavorable.

Being a young man, its result might be laid at your door. Hence, it is best to divide the responsibility of these cases, otherwise your future prospects might be sadly impaired. The mortification, of which we have been speaking, is, however, only a symptom of some deep-seated and insidious disease. Our object will next be, to find out the nature of this disease—the cause of the gangrenous leg. The causes of mortification of an extremity are, defective nervous energy, constitutional debility, mechanical obstruction, ergot of rye, traumatic injuries, and diseased blood vessels. Now let us endeavor to select from this list a cause for our patient's trouble. In paraplegia, large sloughs sometimes occur on the nates and about the gluteal region and hip. These are often mistaken for bed-sores; but I do know that these sloughs occur in regions where there is not sufficient pressure to cause them. Such a condition has been lately exemplified in a patient now in the hospital. In such cases the application of a blister is frequently followed by extensive sloughing. According to Gross, the division of the peroneal nerve, in the removal of a tumor, has been followed by mortification of the small toes. These are examples of mortification from defective nervous energy. It is true that the patient had a hemiplegia, an example of defective nervous energy, but this could not have caused the gangrene, because the paralysis did not occur until nearly a week after the mortification had set in. There was no injury to the nerves of the part. Defective nervous energy did not cause it. Neither was it caused by constitutional debility, for you may all remember the splendidly developed shoulders and chest, and the well nourished face. By mechanical obstruction, we mean tight bandaging, inordinate swelling, pressure by a tumor on the blood vessels, ligature of an artery, etc., none of which existed. In some parts of Europe, mortification of the fingers, indeed all the remote parts of the body in some cases, has prevailed, endemically, from the use of rye bread, in the flour of which was mixed the secale cornutum, or ergot of rye. It is very rare in this country. I am not sure that there is a single case. There is nothing in the history of our case to point to this cause. This species of mortification is dry, black, and free from odor; whereas that of our patient was moist, and very offensive. Of course, in this case, we must also set aside traumatic injury. In seeking a cause for this trouble, let us for a moment consider

diseased blood vessels. The blood vessels, I need scarcely tell you, are the arteries, veins and capillaries. Phlebitis, or simple inflammation of the veins alone, has never in my experience led to mortification of an extremity, nor have I ever read of such a case. What it might do were time allowed, I am unable to say, but such cases usually run a rapid course and end unfavorably from pyæmia. We have now reasoned somewhat by exclusion, which has left us, as a cause of the mortification in our case—diseased arteries. In old age, mortification sometimes takes place from ossification of these vessels, but you must remember that our patient was only 32. Had he been afflicted with chronic gout or rheumatism, there might, possibly, have been a calcareous degeneration of the coats of the arteries, or of the heart, even at his age. If the patient has had one attack of rheumatism you will be led to an examination of the blood vessels and heart. These deposits usually occur about the valves of the heart and aorta, leading to more or less functional disturbance of this organ, and perhaps always to abnormal valvular sounds. The ossific deposit may often be felt in the radial arteries at the wrist. His heart sounds were, however, normal, and the arteries at the wrist felt soft and natural. Our idea of the pathology of the case was not, then, one of ossific deposit in the walls of the arteries.

Now, gentlemen, I have been telling you what was not the pathology of this case, and as far as my time would permit, the manner of tracing the real cause; let me now tell you what was the cause of it. Rudolf Virchow, the distinguished pathologist of Berlin, has described in his book upon Cellular Pathology, an affection, which he terms "Thrombosis"—an affection which seems not to be thoroughly understood, but, upon which much new light must very soon be thrown. Thrombus means a clot, and is derived from the Greek word, *thromboa*, which means to coagulate. The whole process I told you is comprehended under the term Thrombosis, by which you will understand that the artery, or vein, or indeed both of them, are plugged up with a clot of blood. This was our diagnosis before death, and the only satisfaction that now remains is the confirmation of our diagnosis by the pathological specimen—part of the popliteal artery and vein, both of which are occluded by coagula. The cause of Thrombosis is, as yet, obscure. The autopsy, in this case, does

not seem to throw much light upon the subject, especially as we were not permitted to examine the body as thoroughly as desirable, because of the near approach of the hour of burial. The vein is inflamed, and the artery heightened in color. Whether the inflammation led to the coagula, or the reverse, I am unable to determine positively. I am inclined to the former view of the case. Since the patient's death, the woman with whom he boarded told us, that she frequently heard him complain of soreness and pain, when he pulled on his boots. This seems to favor the idea of a pre-existing phlebitis. Virchow, however, says: "That a phlebitis affects the walls, and not the contents of a vessel; that, in large vessels, the most different layers of their walls may enter upon every phase of inflammation, and yet all the time their channel remain entirely unaltered; that even abscesses may form, which cause the walls to bulge on both sides, without any coagulation of the blood ensuing in the cavity of the vessel." It does not seem to me that this latter condition could exist without great danger of Thrombosis. Such an eminent authority as Virchow, however, is entitled to much respect. Pathological research only will reveal the subject in its true light.

There is one other point to which I would call your attention; and that is, to the propriety of making incisions in the mortified limb in order to let the poisonous and irritating fluids drain off. This was suggested at the consultations, but it was decided to substitute a blister upon the calf of the leg, that more or less of the poisonous fluids might pass off in that way. This practice, though quite common in this class of cases in France, has not, it seems, obtained in this country. An examination of the limb has settled the question in my mind that it is proper to make incisions and let out the pent-up secretions. When I opened the leg, nearly a quart of dirty, sanious, highly offensive and irritating fluid came away, which, when left in the limb, I am satisfied, does harm. This quantity remained in spite, too, of considerable fluid having drained off through the blister. Do not hesitate, then, to make incisions instead of blistering. The leg was amputated above the knee, without waiting for a line of demarcation, because it was thought that amputation would give the patient the best chance for recovery.

Autopsy: Lungs hypostatically engorged; liver, heart and kid-

neys normal in appearance; circle of Willis very much attenuated; the brain was softened; but we will say more of the latter when we come to speak of the paralysis and of the aphasic condition of the patient.

(Continued in the next.)

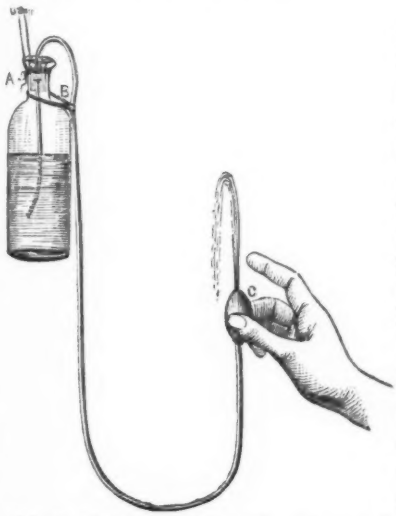
ARTICLE VI.—*Nasal Catarrh.* By MERRITT F. POTTER, M.D., Kaneville, Kane Co., Illinois.

The wide-spread prevalence and obstinate character of Nasal Catarrh, especially in the Northwest, seems almost to entitle it to a place among the "Opprobria Medicorum." The numerous remedies so conspicuously displayed in the newspapers, all claiming the merit of therapeutic infallibility, demonstrate both the extent and obstinacy of this disease. Consisting, as it does, of a chronic inflammation of the mucous membrane of the nasal cavities, the treatment required should be mainly local, and the failure to cure results not so much from ignorance of the proper remedy as from a want of a suitable method of applying it.

The practice of drawing medicines into the nasal cavities by inspiration is so extremely disagreeable as well as difficult, often strangling the sufferer, by entering the larynx, that the cures effected in this way are indeed "few and far between." The Catarrh Syringe is designed expressly for the topical medication of the nasal cavities, and doubtless many cases are greatly relieved by its use. But it should be used by the physician only, and requires so frequent and long continued use that many of those who adopt it for a while are soon tired of a course of treatment which requires so much time and labor. Besides, the liquid is thrown into the nasal cavities so rapidly and with so great force as to be extremely disagreeable to the patient, exciting sneezing and copious lachrymation, and failing to cleanse the morbid tissues because the liquid remains too short a time in contact with the affected part. The discovery by Prof. Weber, of Germany, in 1847, that liquid injected into one nostril through a closely fitting plug, would after filling the cavity, flow around the septum of the nose and escape from the other nostril without entering the throat, was of no ordinary importance, as foreshadowing a more rational

system of therapeutics for this disease, and the subsequent invention by Prof. Thudichum of the device known as the Thudichum Douche, utilized the discovery of his German predecessor, and opened up a new avenue for the application of remedies to a region which, previously, had been nearly inaccessible to topical medication.

The advantages of this apparatus in treating morbid affections of the nasal organs, are very great. By its use it becomes an easy matter to thoroughly wash out the entire nasal cavity, completely deodorizing and disinfecting it, to remove all offensive secretions which accumulate in it, and to apply any remedial agent directly to the seat of the disease, arresting morbid action and disposing the diseased organ to take on the healing process. Valuable as this invention truly is, its bulk and liability to be broken operate to prevent its general adoption. What is wanted is an instrument compact and portable, so that it can be carried in the saddle-bags or pocket, and adapted for immediate use in any apartment without requiring special shelf room, or any fixtures not found in every dwelling. Such an apparatus seems to be represented in the accompanying cut.



C is a small hollow India Rubber bulb, open at both ends, and about the size and shape of a butternut. It is attached to one end of a small tube of the same material, about four feet in length. The other extremity of the tube is inserted in an ordinary pint or quart bottle, to which it may be attached in any convenient manner; a small elastic band looped around the tube and encircling the neck of the bottle, as shown in the figure, is sufficient. A flat piece of India Rubber, with a slotted opening through it barely large

enough to allow the passage of the tube, and inserted in the neck of the bottle, will also retain the tube in place as shown in the cut. If the tube is passed through the loop by which the bottle is suspended, the tension of the loop will be sufficient to prevent the tube from slipping in ordinary cases. To use the instrument, it should be filled and suspended a little higher than the head, to a hook or a common nail. Next compress the bulb between the thumb and two middle fingers of one hand, so as to flatten it and bring the two opposite sides in contact. Press the index finger tightly over the outlet of the bulb and hold it there while the bulb is allowed to expand. The expansion of the bulb causes the liquid to flow through the syphon tube. The finger may then be removed and the bulb applied as a tight-fitting plug to one nostril. The liquid will flow into the nasal cavity of one side till it is filled, and then flowing around the septum of the nose it will be discharged by the other nostril. No possible danger of the liquid flowing into the Eustachian tube, or any other unpleasant effect, can ever result from this operation, provided the liquids are properly prepared and the patient be careful to adopt the simple precaution to *keep the mouth open* during the operation.

If a more forcible jet of the liquid is desired, to dislodge accumulations of adhering sordes, it may be produced by pinching the tube with one hand, to prevent a reflux toward the bottle, and forcibly compressing the bulb with the other, while applied to the nostril.

After using the instrument the liquid remaining in it will all flow back into the bottle if the tube is drawn above the level of the neck. It can then be coiled around three fingers and secured by an elastic band, or tied with a string and carried in the pocket. Any ordinary bottle is suitable to use, provided it is cleaned and a loop two or three inches long be attached to the neck by which to suspend it to a nail.

Of the various remedies in use, common salt, of the strength of about one and a half ounce to the quart of water, of the temperature of ninety-eight degrees, is of more value than all other preparations. Great care should be observed in getting the proper temperature, and the operation should be repeated, in severe cases, three times a day, passing the liquid in *both* directions, and using about one pint each time.

The bulb will fit a nostril of any size, and the material of which it is composed is secure against all danger from breakage. The instrument can scarcely be injured by any ordinary accident, and without any particular care in its usage will last for years.

May 10, 1870.

Original Translations.

Article I. — *Legros and Onimus upon the Influence of Electric Currents upon the Nervous System.* From the Journal de l'Anatomie et de la Physiologie. (Robbins.)

[Continued from June No., 1870.]

§ 6. — *Derived Currents.*

We have stated how derived currents are formed, and how they were manifested in the organism. However relative to the direct current, their action is very feeble, and it may be said, in general, that their influence in man never occasions the disappearance of that of the direct current. It is not so, however, in experiments made upon animals.

Let us suppose a sciatic nerve traversed, during a long time, by a direct current, and that, at each closing of the current, we may have obtained a contraction, and nothing at the opening. We shall see, in proportion as the nerve loses its excitability, the phenomenon become inverse, that is, the contraction shall take place at the opening and not at the closing. The reasons for this phenomenon are as follows: A determinate portion of an electrized nerve being exhausted, the direct current no longer excites this portion, and, consequently, no longer determines contractions at the moment of its closure. But, at the same time that a direct current is established in the same portion of the nerve, a derivative current is formed, which is directed from the muscles of the thigh to the nerve. This current action of nervous terminations, and, consequently, upon nerves not exhausted, will determine an excita

tion of these nervous filaments, and as it is ascending, the currents will take place at the opening, and not at the closing.

One might be astonished at the considerable action of derived currents in the organism, and we have stated the error which we may have committed, by considering as reflex the contractions provoked by derived currents. It is important to recall, here, that nerve, although a conductor of electricity, is, however, a bad conductor, and that explains to us why, when the resistance to the direct current is very strong, the derived currents assume an influence so considerable.

In order that the derived currents may thus change the order of the contractions, it is necessary, as we have said, that the portion of the nerve traversed by the direct current should be no longer excitable. Indeed, by irritating this portion of the nerve by mechanical or chemical excitants, contractions are no longer obtained from the appearance of the influence of derived currents.

MM. Longet and Matteucci have established the fact that, in electrizing mixed nerves, with a direct current, contractions were obtained at the closing, and with an inverse current at the opening; whilst in electrizing the anterior roots, that is to say, nerves purely motor, contractions took place at the commencement of the inverse current, and at the interruption of the direct.

MM. Martin Magron and Rousseau, whilst determining this fact, believe that they could explain it by derived currents. This objection is very serious, but we should add, that in the experiments of MM. Longet and Matteucci, it was necessary to take into consideration other conditions. Thus, M. Claude Bernard has observed, that the law of contractions is not the same, when the experiments are made upon mixed nerves separated from the nervous centre, or upon these same nerves intact and communicating with it. In this case, as in the experiments of MM. Longet and Matteucci, the contractions with an inverse current occur at the closing, and not at the opening.

If the facts observed by MM. Longet and Matteucci are not rigorously exact, in order to distinguish mixed nerves from nerves purely motor, it is then equally difficult to explain them by the single influence of derived currents.

It remains for us to speak of currents of polarization; these have the same cause as the secondary currents, only we distinguish them

in this, that they occur only at the moment of the cessation of the current, whilst the secondary currents exist during all the time that the current traverses the tissues.

§ 7.—*Currents of Polarization.*

In the physical part, we have indicated the nature of currents of polarization. We have referred to experiments made upon animals both warm and cold blooded, and have arrived at this conclusion, that in an organic tissue traversed by a current, there is formed, at the moment of the cessation of the electrization, a direct current in an inverse direction. The experiments of Matteucci, which we have referred to in full, confirm this proposition, and give the explanation of these facts. Lastly, we have likewise instituted the following experiment, which is a new proof of this phenomenon: We immerse in two vessels, filled with distilled water, the extremities of a very sensitive galvanometer; then, by plunging the two hands into these vases, we observe, sometimes, that the needle remains at zero, at others, that it deviates slightly, either to the right or to the left. This deviation is always slight, but, nevertheless, it must be recognized.

Withdrawing, then, the hands from these two vessels, we plunge them into two others, which contain the poles of a continuous current apparatus. After having transmitted the current during a few seconds only, we replunge the hands into the vessels in contact with the galvanometer; immediately the needle is deflected thirty or forty degrees, or even more, and always in a direction opposite to the deflection which it would have experienced if it were influenced by the current used. It is possible, by always placing the same hands in the same vessels in communication with the galvanometer, to obtain a deflection in the opposite direction, if, the first time, the electrization is effected by a current going from right to left, and the second time by a current from left to right. The deflection of the galvanometer is, therefore, really the result of electric currents which continue after the electrization, and which occur in an inverse direction to the current employed. The deflection of the needle is so much the stronger, as the current has been more intense, or applied for a longer time. It occurs rapidly, and is not of long duration. It may be obtained uni-

formly if care is used to wipe the hands promptly before placing them in contact with the conducting wires of the galvanometer.

There is formed, therefore, at the moment of opening the current, another current in the opposite direction to the primary current.

This proposition will account for several phenomena which we have indicated in this chapter. We know, indeed, that when a current is transmitted through a galvanoscopic frog, there is obtained, at the opening of the circuit, a contraction only in the limb which has been traversed by the inverse current. This contraction is so much the stronger, as the passage of the current has continued longer, and as its intensity has been greater. Frequently this contraction becomes a true tetanic state.

Let us remember, that, with the weakest currents, it is the direct current which first determines contraction, which demonstrates that it is this which acts most energetically upon motor nerves. Now, when a nerve no longer produces contraction at the moment of the closure of an inverse current, but, on the contrary, produces it at the opening, it may be admitted that the contraction is due, not to the rupture of the inverse current, but to the action of the direct current of polarization, which is formed at the moment of the opening of the inverse current. This explanation, which was given for the first time by Matteucci, appears to be very exact, and we believe it applicable to the majority of cases.

On the other hand, whilst the motor nerve is influenced in the most energetic manner possible by the descending, the sensory nerve is excited especially by the ascending, current. If, then, a descending current be applied to a motor nerve, it is at the moment of the passage of the current that the nerve, stimulated to activity, will provoke muscular contractions. With an ascending current, as we have just seen, there is formed, at the opening, a descending current, and it is, in reality, at this moment that the contractions occur. Upon the sensitive nerve the ascending current will act at the moment of its application, and moreover, at the closing, reflex actions and evidences of pain are manifested; as to the descending current, it will not act, but at the moment of its opening, or at this instant there is produced an ascending current; and moreover, this is exactly what occurs, for we have already stated that the

phenomena of pain are manifested especially at the cessation of the direct, and at the closure of the inverse, current.

The tetanic state sometimes apparent in the paw which has been traversed, during some minutes, by an inverse current, is likewise due to partial currents which are produced after the electrization. The proof of which is, that by cutting the nerve between the two poles, that is, by preventing the formation of secondary currents, this tetanic state never occurs.

The existence of these currents of polarization may be equally well established in man. We have, indeed, seen that by applying to the upper portion of the cord a sufficiently energetic ascending current, phosphenes appear, especially at the closure of the current, whilst, by employing a descending current, it is at the moment of the opening that the most intense phosphenes are produced. This fact seems explicable only by admitting, that at the moment of the rupture of the descending current an ascending current of polarization is formed, and as it is the ascending current which exercises the greatest influence upon reflex phenomena, it is this, probably, which is produced at the moment of the opening of the descending current, acts even as far as the brain, and likewise the optic nerve.

§ 8.—*Difference of Excitability produced by Changes in the Intensity and Rapidity of the Current.*

Every change in the intensity of a current produced during the contraction of a muscle, is so much the stronger as the intensity of the current is greater. This proposition is only true up to a certain maximum, beyond which variations in intensity no longer produce any excitation. Upon this point we made the following experiment: through a frog, prepared after Galvani's method, the feeble current of Daniel's pile was passed, and whilst this current was maintained, if the influence of a second pile was added, contractions were still manifested at the closing. But if the current of two piles was passed in a continuous manner, the action of two, four, etc., other piles might even be added without exciting contractions: the limbs of the frog remain motionless. This may be readily conceived, for the excitation of the nerve has attained its maximum by the influence of the first two piles, and it can no longer be augmented by stronger currents. This fact demonstrates

that in practice, when the excitation of a peripheral nerve is effected by a current of a certain intensity, it is useless to increase the energy of the current, for the effect would be no longer considerable, and there would be only the disadvantage of occasioning greater pain. In this same experiment, if, in place of transmitting the current in the same direction, we first employ a current from two piles, which is passed in a continuous manner from left to right, for example, and then transmit from right to left a current of equal force, or even two, three times weaker, a series of contractions will be effected, especially in the limb traversed by the ascending current. This fact demonstrates that a current, even much more feeble than another which already affects the nerves, occasions still further contractions when it is transmitted in an opposite direction, probably because it acts upon different nerves. The primary current being descending, for example, will act upon motor nerves, and an ascending current being applied during the passage of the first, to the same limb, will produce excitation of the sensory nerves, and may occasion reflex actions; the action of currents upon motor nerves is, therefore, to a great extent independent of that upon sensory nerves.

Every variation in the intensity of a current, produces in the nerve an excitation by as much stronger as the variation is more rapid (Dubois-Raymond). It is possible, then, by augmenting only with extreme slowness, to put in action upon the nerves a current somewhat intense and yet without producing contractions. To this end, it is necessary, without causing the slightest interruption, to add gradually the force of a new element. By this means the initial shock is avoided, which is always disagreeable, and which sometimes frightens the patient. This process is especially useful when it is desired to electrize the head or the cervical regions, for thus neither phospenes nor confusion will be occasioned. As at the opening of the current, a current is formed in an inverse direction, and just as strong as the current used has been intense; it is likewise necessary to diminish the current gradually; thus the shock of the rupture of the current and of the current of polarization will be avoided. It is possible, in this case, either to slide the reaphore, slowly, upon the adjoining parts when the epidermis is not moistened, which weakens the force of the current, or to diminish the number of the elements without causing any interruption at the

moment when an element is removed; this result may be accomplished by means of a mechanical artifice which has been referred to in the continuous current apparatus.

In applications to the head, it is important never to arrest the electrization abruptly, for when this precaution is neglected, the patient experiences a shock, and quite a strong vertigo. The vertigo should especially be avoided, for it is impossible to be guided by what occurs during the moment of electrization, the vertigo in most cases appearing only at the moment of the rupture of the current.

§ 9. — *Different Opinions Expressed about the Influence of the Direction of the Currents.*

It would be impossible in this chapter to quote and to discuss all the opinions which have been expressed about the influence of electrical currents, when they act directly upon nerves; we shall investigate only the more recent, and those which have been sustained by authorities most justly celebrated. M. Claude Bernard, in his *Leçons sur la physiologie et la pathologie du système nerveux*, gives the following conclusions:*

"*a.* A nerve under its normal organic conditions, fitted to transmit voluntary excitations, when excited by galvanism makes but a single contraction, which occurs at the moment when the current is closed, whatever may be its direction.

"*b.* The nerve under these conditions, resembles muscle which never contracts but at the entrance of the current, whatever may be the direction of the latter.

"*c.* So that the actions of derived currents, so important to be considered on nerves separated from the individual, are without influence upon the nerve in its physiological state."

Upon a subsequent page, M. Claude Bernard, again adds the following conclusions, which are, so to speak, but the corollaries of the previous proposition:

"*d.* The phenomena which the nerve presents under the influence of an excitant, differ greatly, according as it may be contused, wounded, cut, or fresh, and in its normal relations.

* Page 185.

"*e.* All that has been said of the different directions in which contractions may be occasioned, does not apply to the healthy nerve, which always offers the same reactions, whatever may be the excitant to which it may be submitted, and whatever may be the mode in which this excitant be applied."

Our own experiments confirm many of the conclusions of M. Claude Bernard, and from the beginning we have had in view the proposition *d*, which is very important and which explains the majority of the contradictions occurring between different experimenters. We also reached this conclusion, that the action of derived currents is manifest only when the portion of the nerve traversed by the current is no longer excitable, which approximates closely to conclusion *c*, of M. Claude Bernard: "The actions of derived currents, so important to be considered on nerves separated from the individual, are without influence upon the nerve in its physiological state." Our conclusion differs from that of M. Claude Bernard in this, that we believe that, when the nerve is fresh and very excitable, the derived currents have no very manifest influence, whether the nerve be separated from the organism or not. Moreover, it is certain, as experiments made with the galvanometer prove, and as the phenomena of phosphenes and of metallic taste demonstrate, that derived currents exist in every case, and that they exert an influence more or less considerable.

As to the propositions *a*, *b*, and *c*, we believe them incomplete: for as we have already said, it is necessary to distinguish the cases in which nerves alone, from those in which nerves and muscles are acted upon. If in this last case, the contraction occurs especially at the moment of closing, it is not less true that the direction of the currents exhibits a very marked influence, and that under certain conditions there is a strong contraction at the opening of the current. We cannot animadvert sufficiently to this fact: that it is manifest that the direction of the currents has great influence upon the order and the energy of the contractions, and that this is important to be considered by the physiologist and the physician.

We shall perceive as we study pathological cases, how often this distinction is capital, and in a purely physiological point of view, we revert for these facts to paragraph (§ 1) one, and (§ 2) two, of this chapter, where we point out very marked differences, depending upon the directions of currents. This difference has been

established since the time of Aldini and Volta, and we assume it as premise for the deduction of the laws which we have enunciated, not only from facts whichwe have observed, but, in addition, from the very exact and minute investigations of Matteucci.

Marianini (1), Matteucci (2), Remak (3), and several other authors, have asserted that the ascending current acts most energetically upon motor nerves, and the sensitive nerves are excited more strongly by the descending current, admitting, at the same time, that paralysis is a fact analogous to what we have been able to produce by constant currents of nerves having always the same direction; they have hence concluded that paralyses of motion should be treated by ascending, and paralyses of sensation by descending, currents. From the experiments which we have cited, it is, on the contrary, the opposite direction which should be preferred in each case.

Matteucci states, at the same time, that by means of constant currents, tetanic contractions may be arrested in a frog poisoned by strychnia, and that in this case supervenes without any contractions having taken place.

In order to accomplish the object of this experiment, says Matteucci, the ascending is preferable to the descending current, *the former producing less contractions at the beginning.*

This last phrase gives us the explanation of the erroneous ideas, in our opinion, of these different authors. It is true, and we have indicated it, that the ascending current determines in certain cases fewer contractions than the descending; but this difference is only accurate when the reflex actions are diminished or abolished. At the end of a certain time, in the case of tetanus, the ascending as well as the descending current, ought to induce an arrest of the tetanic contractions, for they both maintain the nerves permanently in the molecular state, which remaining constant can determine no muscular contraction. Excess of irritation can even produce this effect, but it seems to us dangerous to endeavor, as Nobili desired, to deaden the nerve in tetanus, it is better to act upon the sensitive nerves, and to make use of the current which in its order

(1) Marianini, Mémoire lu à l'Athénée de Venise. (*Annales de Chimie et de physique*, 1834.)

(2) *Traitè des phénoménes Electro-physiologiques des Animaux*, 1844, p. 270.

(3) *Galvanothérapie.* Paris, 1866, p. 23.

prevents the action of sensitive nerves, and consequently causes a cessation of reflex contractions; now, this is the descending current.

In 1838, Matteucci, upon these theoretical ideas, attempted, with Doctor Farina, to cure a case of traumatic tetanus, by means of a constant current from a pile of thirty or forty elements. *An ascending current* was directed from the sacrum to the nucha. The tetanic contractions ceased, but the patient died nevertheless. Now, by this method of electrization, far from diminishing the excitability of the cord they increased it, and if the cure did not take place, it was due entirely to this permanent excitation of the cord, an excitation appears certainly to us, although the tetanic contractions had ceased.

We shall return to this subject when we come to discuss the action of electric currents upon reflex actions; but henceforth it is possible to judge the influence of physiological experiments upon therapeutices. It becomes, therefore, a matter of paramount importance to determine clearly, the physiological properties of different modes of electrization, and it is because we are persuaded of the truth of this proposition, we deem it useful to insist continually upon these facts, at the risk of being guilty of frequent repetition.

Review.

Obstetric Operations, including the Treatment of Hæmorrhage. By Robert Barnes, M. D., Lond., F. R. C. P.; *with Additions*, by Benjamin F. Dawson, New York City. *First American Edition.*

This book was handed us a few days since for perusal, but our time has been so limited, that we have been forced to run through it in a very superficial, and therefore unsatisfactory, manner; yet it is one of such transcendent merit, we could not refrain from devoting a few moments to speak of its many excellencies, and to give our just mead of praise in favor of its distinguished author.

There exists certainly no medical work in the English language, treating of the various and complicated operations of midwifery; defining so clearly and truthfully the conditions calling for interference; and explaining in such practical terms the mechanism of abnormal labors,—to compare with this; and we can safely affirm that there can be found no surer friend, nor safer guide to the obstetrical physician, and especially to the younger and less experienced members of our profession, who may wish to make this branch an especial study.

The first four or five chapters give us a selection and description of the instruments needed to make up the bag of the accoucheur; their modes of application, and the unnatural states demanding their uses—the lever as a valuable aid in facilitating labors with head presentations; the forceps, not only as an instrument of extraction and compression, but possessing immense powers of leverage, etc. And here he interposes his objections to the short single-curved forceps, as being difficult of introduction, being obliged to seize the head in its transverse diameter, regardless of position or the curves of the pelvis; as tending to lacerate the perinæum even in the hands of the most skillful; almost certain to bruise or tear the edge of the sciatic nerve by the posterior or sacral blade, thus giving rise to more or less protracted paralysis of the leg; and lastly, by pressing on the portio dura as it emerges from the temporal bone, very often paralyzing the side of the face, leaving a staring eye, and inability to suck. His objections are well taken, and his arguments in favor of the double-curved long forceps, sustained by a large and ripe experience, will carry conviction to every mind. This latter instrument is applied on an entirely different principle; adapting itself to the curves of the pelvis, one blade in each ilium, it grasps the head in any position, and by assisting the action of the uterus, *not supplanting it*, gradually extracts from brim to outlet. A description is given of its application to first-coming and after-coming heads, every step of the operation of extraction fully explained, and he winds up by saying that the mortality from its use is *nil*, death occurring only when it is applied too late, and that, therefore, the argument of *post hoc, ergo propter hoc* cannot avail here. Next in order, we arrive at face presentations, one of the best chapters in the book, where the subject is thoroughly discussed in all its bearings,

and its importance will be fully recognized, when we state, in conjunction with all physicians of large practice, that there can occur few complications, engendering such prolonged labors, so painful, and often dangerous to the mother, and so wearisome and harassing to the obstetrist. Chapters VIII and IX are devoted to the multiple agencies producing dystocia, from the various deformities of the pelvic bones, to every faulty condition of the soft parts, and then we come to version, with a highly interesting philosophical explanation of abnormal presentations requiring it, and the bi-polar method of assistance, its great utility in rectifying mal-positions, cephalic and pedalic, and the great range of its application. The bi-polar version was first practiced by Wigand, d'Outrepont and others, with both hands externally applied, whereas the present method, one hand internal and one external on the uterine tumor, was fully elaborated and introduced by Dr. Braxton Hicks, and is now considered of such value, that many cases before impossible to version, can be readily managed by its aid. We here call to mind, witnessing many years ago, in cases of protracted labor, the "Old Grannies" of the plantations, often hop astride their lying-in women, and by a combined sliding, jogging and pressing motion, like a boy on his hobby-horse, endeavor to hasten the expulsion of the fœtus, while the recipients of such gratuitous favors would yell and howl in their agony, alternating with expressions of religious fervor and prayer, not unlike, however, their white congeners; for, in times of pain and peril do we not all become so very good? as explained so racily in that old well-known couplet:

> "When the devil was sick, the devil a monk would be,
> When the devil was well, the devil a monk was he."

He places the limit of turning at 3.25″ to 3.75″ conjugate diameter, when at the latter point it comes in competition with the forceps, and below the former, begins to encroach upon the domain of craniotomy, etc. In performing version, he recommends taking the knee to the foot, and always the *farther*, or *opposite* one, as traction upon it rotates the fœtus upon its long axis, and it comes down more easily.

Craniotomy and cephalotripsy are taught *in extensô*, presenting, however, no new features, until we reach the author's method of embryotomy, performed by his "wire écraseur," manufactured by

Weiss, and endowed with an archimedean screw and windlass. The application of this instrument is easy, the whole force of the operation is expended upon the child, thus avoiding the contusions and lacerations of the mother, and the head can be so reduced—by removing an occipital segment, and also a facial—as to pass an antero-posterior diameter of 1.00″; then the remainder, by lopping off the arms, and eviscerating the chest and belly. He is thus enabled to spare the mother in many instances the dangers of the cæsarean section. In regard to this last, he views it both in its moral and material aspects, leaning ever to the side of humanity, handling the mother with all the tenderness of a noble and generous nature, and by his sound logic sweeping away many of the old guides and landmarks of sacrificial midwifery. He takes the limit at 1.75″, and generally in those cases of osteomalacia, where the bones will not open up under pressure, and where the transverse and diagonal diameters offer insufficient accommodation for a narrow conjugate. He believes it is rarely called for in rickety pelvis; occasionally when craniotomy may have failed; in some cases of rupture of uterus; malignant disease: death of mother, etc. The induction of premature labor is presented to us as a very important subject, and necessitated, of course, by those conditions where a fully developed child could not be brought into the world without a sacrifice of life. In cases of contracted pelvis, the conjugate diameter 2.50″, the development should not exceed 250 days, and we should rather run the risk of a non-viable child; and with still smaller diameter, the operation becomes more imperative, though the birth may require extraneous interference. That a child may be viable, and stand some chance of surviving, he reckons the pregnancy from the day after the last menstrual epoch, counts 230 days, and adds 20 more as a margin of safety, thus leaving one full calendar month for the complete growth of fœtus. Among the means of inducing labor prematurely, he describes the many modes of cervical dilatation, from the vaginal douche of Kiwish; the injections *in uterô* of fluids by Lazarawitch; of gases and of air; tents; irritation by various "diastaltic persuaders;" and finally, best of all, the immediate method by his "hydrostatic dilators." In cases of great emergency, dilatation and delivery can be secured anywhere from one to six hours, the caoutchouc dilators acting upon the principle

of the "bag of waters," exerting a steady equable pressure, elastic and sure to relax the most rigid os. The author's method of procedure challenges our attention. He divides it into two stages; the first, the *provocative;* the second, *accelerative;* and when the operation is determined upon, he introduces at night an elastic bougie seven or eight inches into the womb, and tucks away the outside portion in the vaginæ. Next day, finding the cervical canal somewhat open, and evidences of commencing uterine action, he proceeds to the second or *accelerative* stage, punctures the membranes, and leaves the rest to Nature; but in those cases where complications arise demanding immediate action, dilates with his caoutchouc bags, and, if necessary, turns so as to complete the delivery soon as practicable.

Placenta prævia comes next into notice, and forms the most important chapter of the book. In this he explains his physiological doctrines of development and implantation; the philosophy of hæmorrhage; and controverts the old fashioned ideas of treatment, showing their weakness and fallacy; for instance, the method prescribed of passing the hand and detaching the placenta *in totô*, he demonstrates its utter impracticability, since the placenta in the greater number of cases extends higher than the meridian of the uterus, very often reaching as high as the fundus, the fingers not being long enough to extend half way to its farther margin, and the cervix being generally too rigid and undilatable to permit the passage of hand in cavity of womb.

A priori, it is assumed that total detachment stops bleeding; this is partly true, and partly fallacious; for if the placenta is thrown off *spontaneously* hæmorrhage ceases, but it does not justify the belief of arrestation upon *artificial* separation. There exists a fundamental physiological distinction between the two cases. In the first instance *spontaneous* detachment is due to the contractile power of the uterus, the hæmorrhage being arrested by the same agency; whereas, if pulled off *artificially*, there being defective uterine contraction, bleeding continues. The chief points in placental attachment are illustrated by a diagram, dividing the internal uterine surface into three zones, fundal, meridional, and cervical; the first, the seat of *safe* attachment; the second, *comparatively safe*, but may lead to obliquity of womb, oblique position of the child, lingering labor, and thus dispose to

retention of placenta, and *post partum* hæmorrhage; the cervical, the place of *dangerous* attachment, and all implantations here, whether it be the encroachment of a small portion, or whether the entire mass, is liable to previous dislodgment. This lower polar circle is therefore the physiological line of division between prævial and lateral placentæ, *below* which you have spontaneous detachment and hæmorrhage, *above* which, neither. Having entered these points, the treatment is evident; puncture the membranes to allow the uterus to exert a proper pressure; effect dilatation with the "hydrostatic bags," if it becomes necessary; and should hæmorrhage still continue, then introduce one or two fingers and detach that portion of placenta within the orificial zone; still further hasten by the oxytocics, or resort to version. The hæmorrhage resulting from placenta prævia is called by Rigby the "unavoidable," to distinguish it from his "accidental," occasioned by detached placenta during gestation. The differentiation of the accidental is not always an easy matter, being determined by subjective symptoms generally; but, if occurring, whatever the cause, it calls for immediate delivery, by the methods above enumerated, at the same time keeping up your patient by warm cordials, food, etc., etc.

As to the *post partum* hæmorrhages, whether from retained placenta due to unequal uterine contraction, or to adhesion from diseased conditions, or to accumulation of clots, etc., etc., we have little to say, except to notice one simple and invariable rule; that is, to control them, the *uterus must be fully emptied of its contents*, not only by every means possible to induce contraction, but by the introduction of the hand, and even by the use of the wire ecraseur should retained portions, or cotyledons, be the causation, and if then bleeding should persist, the injection, repeated if necessary, of the per-chloride of iron—1 to 3 of water. Such complications as fibrous tumors, polypi, inversion, etc., are to be managed upon general principles, though in regard to the reduction of inversions by pressure and manipulation, he says, in passing back the womb, remember the pelvic axes, and when you reach the sacral promontory, pass the organ to *one side*. The operation of Dr. T. G. Thoms is here introduced by the American editor, as being novel, and the only means we may possess, when all others have failed. *Prima facie* it seems a formidable

one, yet, if the patient is prepared by the exhibition of opiates several days before, as recommended by the celebrated Dr. Todd, in all operations involving the peritoneum, there exist very strong reasons to predict a safe recovery. He cuts a few inches along the medion line above the symphisis pubis, into abdominal cavity, finds the inverted neck, introduces a steel instrument like a glove stretcher, dilates, and by the taxis returns the womb to its normal position.

Transfusion is spoken of very cleverly, and he looks upon it, *in futurô*, as a powerful agency in the hands of professional men to restore life, where excessive bleedings have taken place, etc. Without commenting upon the various methods and fluids to be employed, we may state that this operation will prove more uniformly successful where defibrination is practiced, and this process has been very ably demonstrated by Prof. Freer, of this city, not many months back.

The appendix treats of the difficulties of twin labors—head-locking and hæmorrhage—dorsal displacement of arm (as a rule due to the *nimia diligentia* in midwifery—an ugly complication, and, if not reduced, requiring operative interference); and the birth of monsters. There are no points to be particularly dwelt upon in this chapter, but what may be gleaned from any of the standard works, and in closing this analysis, we feel justified in giving this excellent treatise our most positive endorsement. A book that should be in the hands of every practitioner; clear and succinct in its statements; logical in its deductions; of pure diction, and thoroughly intelligible in its descriptions; filled with valuable facts coming from a man highly cultivated, of remarkable diagnostic powers; excellent judgment; and so humane and conservative that he should merit the thanks and gratitude of every member of our profession.

The American editor, with a modesty characteristic of true worth, has kept himself in the background, making few additions, and those from the best sources, and always *à propos* of the subject, and hence sparing us—for which he cannot be too highly commended—the insertion of prosy and lengthened extracts, generally so tedious and worthless, and only serving to interrupt the harmony of the original text.

"VOLTA REEKE."

Editor's Book Table.

[NOTE.—All works reviewed in the columns of the CHICAGO MEDICAL JOURNAL may be found in the extensive stock of W. B. KEEN & COOKE, whose catalogue of Medical Books will be sent to any address upon request.]

Renal Diseases: A Clinical Guide to their Diagnosis and Treatment. By W. R. Basham, M.D., Fellow of the Royal College of Physicians; Senior Physician to the Westminster Hospital, and Lecturer on Medicine, etc., etc. With Illustrations. Philadelphia: Henry C. Lea, 1870. Pp. 304.

This is an unpretending volume, but one which we take pleasure in recommending to our readers as a clear and practical essay—one which will materially facilitate the acquisition of practical clinical ability, both with regard to diagnosis and treatment. It is divided into three parts; the first of which is devoted to the various forms of Nephritis, their symptoms, diagnosis and treatment; the second discusses "Chronic Nephritis—Chronic Albuminuvia," or those diseases without primary symptoms of inflammation; the third reviews, with illustrations, the Clinical Significance of the Urine.

The ten pages on Tubercular Nephritis and Pyelitis are, alone, worth more than the price of the entire volume. It is the most satisfactory exposition of the subject in a short space, that we have had the fortune to meet.

Gray's Anatomy,—

The new edition of which was announced in the June number, needs no introduction to our readers. It is pre-eminently *the* text book. This edition comprises much valuable new matter upon the topics: general anatomy, the development of the ovum and fœtal structures, and a compendious introduction to the study of microscopic anatomy. We scarcely see how the book can be further improved for the student. All else wanting can be furnished only by the scalpel and cadaver.

United States Sanitary Commission Memoirs — Surgical — receipt acknowledged last number, is a volume uniform with the Medical Memoirs previously issued. Octavo, pp. 586, and ten chromo lithograph plates. $6.50.

The first memoir treats: "On the Wounds of Bloodvessels, Traumatic Hemorrhage, Traumatic Aneurism, and Traumatic Gangrene." The second: "On the Secondary Traumatic Lesions of Bone, namely: Osteo-Myelitis, Periostitis, Ostitis, Osteo-Porosis, Caries, and Necrosis." The third: "Pyæmia."

The memoirs are by John A. Lidell, A.M., M.D., etc., etc. Edited by Prof. Frank Hastings Hamilton.

A large amount of valuable material has been utilized to an extent which we had reason to anticipate from the high reputation both of the author and editor.

Pamphlets.

The Remedies we Use. An Impartial View of the Present State of the Materia Medica, with Suggestions for its Improvement. [Anonymous.] Nashville, Tenn.: Gamble & Son, No. 46 Union Street.

Notes on the Physiology and Pathology of the Nervous System, with Reference to Clinical Medicine. A. Disseminated Sclerosis of the Brain and Spinal Cord. B. Annular or Cervical Sclerosis of the Spinal Cord. By Meredith Clymer, M.D., etc. New York: D. Appleton & Co.

Transactions of the Wisconsin State Medical Society, for the year 1869. Vol. III.

Editorial.

Fees for Life Insurance Examinations.

The American Medical Association, at its late meeting passed a resolution fixing Five Dollars as the fee for each examination for life insurance. It would be a pleasant state of affairs if this could become also a fixed fact. But so long as otherwise respectable physicians, who would not venture to crowd out brother practitioners from the care of patients, think themselves wholly justifiable in attempting to displace them as life insurance examiners, we think Companies will not be rapid in advancing the fees.

The scramble for positions of this sort is as funny as a Canada scrub race, and would awaken inextinguishable ridicule and laughter were it generally known.

Prices are nowhere "fixed" by resolution, but solely in accordance with the great laws of supply and demand.

Medical Experts.

A city paper, in view of this topic advances a few sensible ideas, which we hope will awaken interest in this most important matter, among the people. Any physician who has ever been on the witness stand as an expert must realize their essential truth. In the "hypothetical case" put to the witness, the lawyer, of course, always "supposes" the facts proved as he wishes them to be proved. Meanwhile the expert may positively know that the testimony in no degree warrants any such hypothesis.

We fervently trust that this is the true explanation of certain testimony (otherwise atrocious and disgraceful to the profession to the last degree) in the McFarland case in New York.

Our secular contemporary says:

"Several recent trials have exhibited the folly of the present system of examining experts in court, and especially physicians, in regard to the sanity of the prisoner, witness, testator, or other interested party. Under the present practice, a doctor is called by the prosecution and another by the defense, or, more frequently, several of these learned gentlemen by each party to the proceeding. The witness is examined, not by the court or the jury, but by the attorneys, and not on the evidence already adduced, but on the

fruitful suppositions furnished by the lawyers. The physician who testifies in the case may not have heard a particle of the evidence before the court, but, if a prosecution witness, is asked: "If such and such be the case, is not this man insane!" Of course, he must answer in the affirmative. If he is called by the defense, on the other hand the form of the question is: "If so and so be true, can this man possibly be insane?" Of course, he replies in the negative.

The result of this mode of procedure may be, and indeed usually is, to array a formidable host of learned men, who go to work apparently to contradict each other in the most scandalously absurd manner. The poor juror, with the best intentions in the world, but with a not particularly acute penetration, and befogged more than usual by the shrewd manœuvering of the lawyers, says, with the rest of mankind, "When doctors disagree, who shall decide?" and then gives his verdict according to his latest impressions or to his private estimate of the relative reliability or honesty of the medical witnesses. The doctors, too, whose intentions may be quite as good, go out of court at least in a very ridiculous position, and often under the aspersion of perjury, or dishonesty, or incapacity.

"The practice of the courts should be changed in this matter. If the question be purely professional, and the result turn entirely upon the confirmed sanity or insanity of an individual, as is often the case, then the trial should be before a jury of experts, when consultation would not be simply a trial of obstinacy, but a comparison of scientific research that would be likely to lead to truth. If other interests enter into the trial, and it is not considered desirable to have a jury composed of one class of men, with similar habits and thoughts, then the testimony of experts should be taken after all the other evidence is in, and under the charge of the court. Under this practice, there would be less of the apparent confliction of testimony, confusion of juries, injustice in verdicts, and scandal among the doctors."

Magnetic Springs.

Prof. Robert C. Kedzie, M.D., of Lansing, Mich., is inclined to attribute the magnetic peculiarities of the much vaunted St. Louis and other mineral springs, of that State, to the iron tubing of the artesian wells through which the water flows. Various speculations are afloat on the subject, and meanwhile the springs are haunted by multitudes of the lame, halt, and blind, and cures are as abundant as whilom in this city from the commands of "Prof. Newton." His "Disease, depart!" only equaled in efficacy the waters with "Magnetism blown into the bottles" of the Michigan pools of Bethesda. *Populus vult decipi, et decipiatur.*

Loot.

Intestinal Puncture in Tympanitis.

Under the advice of Dr. Fonssagrives, intestinal puncture, as a last resource, has been several times practiced at Toulouse, on two patients suffering with tympanitis. In the first case, the abdomen formed an immense mass, the patient was perfectly cyanosed and suffocating. An exploring trocar was inserted into the most distended part of the lower umbilical region. The gas escaped so violently as to extinguish a candle. The distention returning the next day, two fresh punctures were made in different places, and gave so much relief that the life of the patient was prolonged four days. In another case six punctures were successfully made until the gases were naturally evacuated and the patient cured.—*L'Un Med.—West. Jour. of Med.*

M. Auzias Turenne on Rabies.

This ingenious investigator endeavors to establish, (in a paper read before the Academy of Medicine of Paris,) a parallel between the phenomena of rabies and those of syphilis. It will be remembered that Marochetti considered that the virus, after having been absorbed by the wound, enters the circulation, and then gathers under the tongue. From the third to the ninth day small vesicles appear on either side of the frenum linguæ; they contain the virus, and are called lyssæ. Marochetti believed that by cauterizing these vesicles the further progress of the disease would be prevented. Experience has not confirmed his views; but M. Turenne, starting from these phenomena, has attempted to liken rabies to syphilis, and lyssæ to the infecting chancre.—*Dominion Med. and Surg. Journal.*

New Remedies for Burns.

Two new remedies for burns are added to the long list. The first is charcoal. A piece of vegetable charcoal laid on a burn at once soothes the pain, says the *Gazette Medicale*, and if kept applied for an hour cures it completely. The second one is sulphate of iron. This was tried by M. Joel, in the Children's Hospital, Lausanne. In this case, a child, four years of age, had been extensively burnt, suppuration was abundant and so offensive that the ward was uninhabitable. M. Joel ordered the child a tepid bath, containing a couple of pinches of sulphate of iron. This gave immediate relief to the pain, and being repeated twice a day—

twenty minutes each bath—the suppuration decreased, lost its odor, and the child was soon convalescent.—*Med. Press and Circular, April* 6, 1870.—*Med. News.*

Three parts of any simple oil, linseed, whale, or olive, with one part of Tilden's Solution of Carbolic Acid, has afforded us most excellent results in severe burns, from kerosene explosions. But the simplest plan, because the materials are everywhere easily obtained, is to melt together one part of beeswax and two parts of fresh lard, dip cloths in this and apply accurately to the surface. These will thoroughly exclude the air, can easily be renewed, and, in short, accomplish all that can be expected from external appliances. This last application relieved a friend of ours from a most frightful powder burn of the face with scarcely a mark left behind except from some particles of powder.

Chloral and Chloroform.

Communications on chloral multiply daily. Among some of its curious effects may be noticed an observation of M. Liégeois at the Sociète de Chirurgie that in a case in which he had performed a minor operation under the influence of chloral, which produced sleep, but not anæsthesia, he resorted to chloroform. To his great surprise he found that the association, so far from increasing the effects, gave rise to excitement which lasted as long as the inhalations were continued. The fact is the more to be remarked as tending to disprove the identity of action between chloral and chloroform insisted upon by Liebreich. M. Giraldés, proceeding in a different direction, administered to infants who have been chloroformed and remained very agitated, a chloral draught. The effect of the association was to produce peaceful sleep for from five to eleven hours. Since then he has frequently employed chloral, either in mixture or enema, whenever children have remained excited after chloroform, and always with success. M. Demarquay observed that he has continued, with advantage, his practice of giving patients immediately after operation successive doses of two or three to five grammes of chloral until sleep is produced. All subjects are, however, far from exhibiting the same effects from the action of chloral. In some, when it is given immediately after the operation, it produces a quiet sleep and deep calm which lasts all day, and prevents any of the pain consequent on the traumatism being felt. Others proved refractory to the action of chloral, which is sometimes rejected by vomiting. As a medium dose he gives two grammes in two spoonsful of syrup diluted with water. M. Giraud-Teulon has observed the same excitement pro-

duced by administering chloral in children that have been etherized as related by M. Liégeois in those who have been chloroformed. —*Ibid.*

Management of Pertussis.

In Newark, N. J., most of the physicians send their patients to the purifying room of the gas works, to spend an hour or two daily, the inhalation of the fumes arising from the gas passing through lime having the effect of moderating and shortening the disease. In cases where it is inconvenient to visit the works, carbonate of lime has been produced therefrom, and placed in vessels about the room in quantities sufficient to impregnate the atmosphere, and has been attended with good results. When access to gas works cannot be had, the hydro phenil, which, when unpurified, is called benzine, is recommended by Braithwaite; and the same results obtained as from a residence in the purifying chambers of the gas works. Ten or fifteen drops are given in a little water to a child every day, and as soon as it is asleep a few drops are sprinkled on the pillow, so that the smell is diffused throughout the room.—*Trans. of Med. Soc. of New Jersey.*

Cancrum Oris.

Abstract of a paper read at a meeting of the Liverpool Medical Association by Thomas R. Glynn, M.B., Lond. (*Liverpool Medical and Surgical Reports and Half-Yearly Abstract*).

The author confined the term to those cases in which gangrene of the lips or cheeks is a prominent feature. He did not think it was of the nature of a specific disease; because,—1st. It never attacks children as a distinct disease preceded by characteristic symptoms, though some have affirmed that it does. 2d. It is always the consequence of some severe illness, especially of the eruptive fevers, and, of these, measles most frequently precedes it. 3d. It is not infectious, though sometimes epidemic, but only as a consequence of the exanthemata. It very rarely attacks several children in a family simultaneously. It appears to depend upon great deterioration of the blood, springing from a general adynamic state, which may originate from many and various depressing causes. It is much more rarely met with among adults than among children, though not unknown among the former. The facts that the mucous membrane of the mouth is more liable to disease in children, and that measles occur chiefly among them, account partly for their great liability to cancrum oris. It has been known to occur at so early an age as nine days. It rarely attacks both cheeks, except as the result of mercurial salivation. Girls are most subject to it, and the majority of cases occur in large towns and manufacturing districts. It is emphatic-

ally a disease of the poor. Sometimes symptoms almost like scurvy are present, and the author expressed the opinion that it is not improbable some intimate relation may exist betwen scurvy and cancrum oris. He does not believe that mercury is the most common cause of the disease, as some think. He considered the gangrene to be the result of a low erysipelatous inflammation, commencing in the mucous membrane of the mouth. Gangrene of other parts may occur as complications; also pneumonia, which is very common; pleurisy, pericarditis, and other diseases of the mucous and serous membranes. The rate of mortality in cancrum oris has been excessively high. With regard to treatment, the author remarked that before applying escharotics, the general condition should be considered rather than the local. Nitric acid is useful at first, but its repeated application is injurious. Antiseptics are of great use. Tonics and stimulants constitute the proper internal treatment. The author gave the details of two cases, treated successfully by the use of chlorate of potash wash, and the internal administration of ammonia, chlorate of potash, and bark, with beef tea, wine, and brandy.—*Dental Cosmos.*

Almost Complete Ossification of the Human Body.

B., a youth of 17, came under my notice, first, about four years ago with extensive ossification of the muscular system, which continued to progress till his death, which occurred a short time since. The early history of his case, as given by his family, is as follows:

He was a healthy, stout child at the age of eight months, at which time his parents moved to Texas by land. During their continuance on the road and camping out, they first discovered tumors about, in different parts of his body, the size of small marbles, and very hard. These tumors gave, apparently, but little pain, and in no way affected the general health. After an interval of twelve or eighteen months the tumors began to disappear by absorption, and about the same time stiffness of the joints was manifested. Gradual anchylosis followed, and at the age of ten years the hip-joints with those of the arms were completely anchylosed. The ossific matter began then to be deposited in the muscular system. The chest became enclosed with a complete sheet of bone, leaving no traces of outline of the ribs. The head was immovably fixed by the ossification of the sterno-cleido mastoideus on each side. The muscles of mastication were as yet unaffected, and his ability to chew his food not impaired. His digestion was good, and his mental faculties more than ordinary. He could as yet use wrists and hands, his arms being stiffened at right angles, thus allowing him to whittle a little with a pen-knife. When placed upon his feet he could move slowly and cautiously over a smooth surface, but if he got a fall, was unable to rise unassisted.

Movement, however, as the anchylosis progressed, became more and more difficult and totally impossible at a later period. He did not increase in stature after his tenth year, and never manifested any signs of virility. The forms of the muscles were perfectly preserved and could be distinctly felt through the skin, which adhered closely to them. The deposition of ossific matter continued during his life, and, when he died he was almost complete bone. Up to the hour of his death his mind continued clear and unimpaired, and his digestion until a short time previous, and he was cheerful and apparently happy.—*W. M. Byers, M. D., New Orleans Journal of Medicine.*

Rip Van Winkle, M. D.

An After Dinner Prescription. Taken by the Massachusetts Medical Society, at their Meeting held May 25th, 1870.

[We are indebted to the *Boston Medical Journal*, for Prof. O. W. Holmes' Poem, which we reproduce because it contains philosophy as well as fun. Comment is unnecessary—"Good wine needs no bush."]

Canto First.

Old Rip Van Winkle had a grandson, Rip,
Of the paternal block a genuine chip;
A lazy, sleepy, curious kind of chap;
He, like his grandsire, took a mighty nap,
Whereof the story I propose to tell
In two brief cantos, if you listen well.

The times were hard when Rip to manhood grew;
They always will be when there's work to do;
He tried at farming—found it rather slow—
And then at teaching—what he didn't know;
Then took to hanging round the tavern bars,
To frequent toddies and long-nine cigars,
Till Dame Van Winkle, out of patience, vexed
With preaching homilies, having for their text
A mop, a broomstick—aught that might avail
To point a moral or adorn a tale,
Exclaimed—"I have it! Now then, Mr. V.!
He's good for *something*—make him an M.D."!

The die was cast; the youngster was content;
They packed his shirts and stockings, and he went.
How hard he studied it were vain to tell—
He drowsed through Wistar, nodded over Bell,
Slept sound with Cooper, snored aloud on Good;
Heard heaps of lectures—doubtless understood—
A constant listener, for he did not fail
To carve his name on every bench and rail.

Months grew to years; at last he counted three,
And Rip Van Winkle found himself M. D.

Illustrious title! in a gilded frame
He set the sheepskin with his Latin name,
RIPUM VAN WINKLUM, QUEM we—SCIMUS—know
IDONEUM ESSE—to do so and so;
He hired an office; soon its walls displayed
His new diploma and his stock in trade,
A mighty arsenal to subdue disease
Of various names, whereof I mention these:
Lancets and bougies, great and little squirt,
Rhubarb and Senna, Snakeroot, Thoroughwort,
Ant. Tart., Vin. Colch., Pil. Cochiæ and Black Drop,
Tinctures of Opium, Gentian, Henbane, Hop,
Pulv. Ipecacuanhæ, which for lack
Of breath to utter men call Ipecac,
Camphor and Kino, Turpentine, Tolu,
Cubebs, "Copeevy," Vitriol—white and blue,
Fennel and Flaxseed, Slippery Elm and Squill,
And roots of Sassafras and "Sassaf'rill,"
Brandy—for colics—Pinkroot, death on worms—
Valerian, calmer of hysteric squirms,
Musk, Assafœtida, the resinous gum
Named from its odor—well, it does smell some—
Jalap, that works not wisely, but too well,
Ten pounds of bark and six of Calomel.

For outward griefs he had an ample store,
Some twenty jars and gallipots, or more:
Ceratum simplex—housewives oft compile
The same at home, and call it "wax and ile";
Unguentum Resinosum—change its name,
The "drawing salve" of many an ancient dame;
Argenti Nitras, also Spanish flies,
Whose virtue makes the water-bladders rise—
(Some say that spread upon a toper's skin
They draw no water, only rum or gin)—
Leeches, sweet vermin! don't they charm the sick?
And Sticking-plaster—how it hates to stick!
Emplastrum Ferri—ditto *Picis*, Pitch;
Washes and Powders, Brimstone for the——which,
Scabies or *Psora*, is thy chosen name
Since Hahnemann's goosequill scratch'd thee into fame,
Proved thee the source of every nameless ill,
Whose sole specific is a moonshine pill,
Till saucy science, with a quit grin,
Held up the Acarus, crawling on a pin?
—Mountains have labored and have brought forth mice:
The Dutchman's theory hatched a brood of—twice
I've well nigh said them—words unfitting quite
For these fair precincts and for ears polite.

The surest foot may chance at last to slip,
And so at length it proved with Doctor Rip.
One full-sized bottle stood upon the shelf
Which held the medicine that he took himself:
Whate'er the reason, it must be confessed
He filled that bottle oftener than the rest;
What drug it held I don't presume to know—
The gilded label said "Elixir Pro."

One day the Doctor found the bottle full,
And, being thirsty, took a vigorous pull,
Put back the "Elixir" where 'twas always found,
And had old Dobbin saddled and brought round.
—You know those old-time rhubarb-colored nags
That carried Doctors and their saddle-bags;
Sagacious beasts! they stopped at every place
Where blinds were shut—knew every patient's case—
Looked up and thought—the baby's in a fit—
That won't last long—he'll soon be through with it;
But shook their heads before the knockered door
Where some old lady told the story o'er
Whose endless stream of tribulation flows
For gastric griefs and peristaltic woes.

What jack o' lantern led him from his way,
And where it led him, it were hard to say;
Enough that wandering many a weary mile
Through paths the mountain sheep trod single file,
O'ercome by feelings such as patients know
Who dose too freely with "Elixir Pro.,"
He tumbl—dismounted, slightly in a heap,
And lay, promiscuous, lapped in balmy sleep.

Night followed night, and day succeeded day,
But snoring still the slumbering Doctor lay.
Poor Dobbin, starving, thought upon his stall,
And straggled homeward, saddle-bags and all;
The village people hunted all around,
But Rip was missing—never could be found.
"Drownded," they guessed;—for more than half a year
The pouts and eels *did* taste uncommon queer;
Some said of apple-brandy—other some
Found a strong flavor of New England rum.

—Why can't a fellow hear the fine things said
About a fellow when a fellow's dead?
The best of doctors—so the press declared—
A public blessing while his life was spared,
True to his country, bounteous to the poor,
In all things temperate, sober, just and pure;
The best of husbands! echoed Mrs. Van,
And set her cap to catch another man.

—So ends this Canto—if it's *quantum suff.*,
We'll just stop here and say we've had enough,
And leave poor Rip to sleep for thirty years;
I grind the organ—if you lend your ears
To hear my second Canto, after that
We'll send around the monkey with the hat.

Canto Second.

So thirty years had passed—but not a word
In all that time of Rip was ever heard;
The world wagged on—it never does go back—
The widow Van was now the widow Mac—

France was an Empire—Andrew J. was dead,
And Abraham L. was reigning in his stead.
Four murderous years had passed in savage strife,
Yet still the rebel held his bloody knife.
—At last one morning—who forgets the day
When the black cloud of war dissolved away?
The joyous tidings spread o'er land and sea,
Rebellion done for! Grant has captured Lee!
Up every flagstaff sprang the Stars and Stripes—
Out rushed the Extras wild with mammoth types—
Down went the laborer's hod, the schoolboy's book—
"Hooraw!" he cried—"the rebel army's took!"
Ah! what a time! the folks all mad with joy:
Each fond, pale mother thinking of her boy;
Old gray-haired fathers meeting—Have-you-heard?
And then a choke—and not another word;
Sisters all smiling—maidens, not less dear,
In trembling poise between a smile and tear;
Poor Bridget thinking how she'll stuff the plums
In that big cake for Johnny when he comes;
Cripples afoot—rheumatics on the jump,
Old girls so loving they could hug the pump,
Guns going bang! from every fort and ship—
They banged so loud at last they wakened Rip.

I spare the picture, how a man appears
Who's been asleep a score or two of years;
You all have seen it to perfection done
By Joe Van Wink—I mean Rip Jefferson.
Well, so it was—old Rip at last came back,
Claimed his old wife—the present widow Mac—
Had his old sign regilded, and began
To practice physic on the same old plan.

Some weeks went by—it was not long to wait—
And "please to call" grew frequent on the slate.
He had, in fact, an ancient, mildewed air,
A long grey beard, a plenteous lack of hair—
The musty look that always recommends
Your good old Doctor to his ailing friends.
—Talk of your science! after all is said
There's nothing like a bare and shiny head—
Age lends the graces that are sure to please,
Folks want their Doctors mouldy, like their cheese.

So Rip began to look at people's tongues
And thump their briskets (called it "sound their lungs"),
Brushed up his knowledge smartly as he could,
Read in old Cullen and in Doctor Good.
The town was healthy; for a month or two
He gave the sexton little work to do.

About the time when dogday heats begin,
Measles and mumps and mulligrubs set in;
With autumn evenings dysentery came,
And dusky typhoid lit his smouldering flame;
The blacksmith ailed—the carpenter was down,
And half the children sickened in the town.

The sexton's face grew shorter than before—
The sexton's wife a brand-new bonnet wore—
Things looked quite serious—Death had got a grip
On old and young, in spite of Doctor Rip.

And now the Squire was taken with a chill—
Wife gave "hot drops"—at night an Indian pill;
Next morning, feverish—bedtime, getting worse,
Out of his head—began to rave and curse;
The Doctor sent for—double quick he came:
Ant. Tart. gran. duo, and repeat the same
If no et cetera. Third day—nothing new;
Percussed his thorax—set him cussing, too—
Lung-fever threatening—something of the sort—
Out with the lancet—let him blood—a quart—
Ten leeches next—then blisters to his side;
Ten grains of calomel——just then he died.

The Deacon next required the Doctor's care—
Took cold by sitting in a draught of air—
Pains in the back, but what the matter is
Not quite so clear—wife calls it "rheumatiz."
Rubs back with flannel—gives him something hot—
"Ah!" says the Deacon, "that goes *nigh* the spot."
Next day a *rigor*—run, my little man,
And say the Deacon sends for Doctor Van.
The Doctor came—percussion as before,
Thumping and banging till his ribs were sore—
"Right side the flattest"—then more vigorous raps—
Fever—that's certain—pleurisy, perhaps.
A quart of blood, will ease the pain, no doubt,
Ten leeches next will help to suck it out,
Then clap a blister on the painful part—
But first two grains of *Antimonium Tart.*
Last, with a dose of cleansing calomel
Unload the portal system——that sounds well!

But when the self-same remedies were tried,
As all the village knew, the Squire had died;
The neighbors hinted—"this will never do,
He's killed the Squire—he'll kill the Deacon too."

—Now when a doctor's patients are perplexed,
A *consultation* comes in order next—
You know what that is? In a certain place
Meet certain doctors to discuss a case
And other matters, such as weather, crops,
Potatoes, pumpkins, lager beer and hops.
For what's the use?—there's little to be said,
Nine times in ten your man's as good as dead—
At best a talk (the secret to disclose)
Where three men guess and *sometimes* one man knows.

The counsel summoned came without delay—
Young Doctor Green and shrewd old Doctor Gray—
They heard the story—"Bleed!" says Doctor Green,
"That's downright murder! cut his throat, you mean!

Leeches! the reptiles! Why, for pity's sake,
Not try an adder or a rattlesnake!
Blisters! Why bless you, they're against the law—
It's rank assault and battery if they draw!
Tartrate of Antimony! shade of Luke,
Stomachs turn pale at thought of such rebuke!
The portal system! What's the man about?
Unload your nonsense! Calomel's played out!
You've been asleep—you'd better sleep away
Till some one calls you "——
"Stop!" says Doctor Gray—
"The story is you slept for thirty years;
With brother Green, I own that it appears
You must have slumbered most amazing sound;
But sleep once more till thirty years come round,
You'll find the lancet in its honored place,
Leeches and blisters rescued from disgrace,
Your drugs redeemed from fashion's passing scorn,
And counted safe to give to babes unborn."

Poor sleepy Rip, M.M.S.S., M.D.,
A puzzled, serious, saddened man was he;
Home from the Deacon's house he plodded slow
And filled one bumper of "Elixir Pro."
"Good bye," he faltered, "Mrs. Van, my dear!
I'm going to sleep, but wake me once a year;
I don't like bleaching in the frost and dew,
I'll take the barn, if all the same to you.
Just once a year—Remember! no mistake!
Cry 'Rip Van Winkle! time for you to wake!'
Watch for the week in May when laylocks blow,
For then the Doctors meet, and I must go."

Just once a year the Doctor's worthy dame
Goes to the barn and shouts her husband's name,
"Come, Rip Van Winkle!" (giving him a shake)
"Rip! Rip Van Winkle! time for you to wake!
Laylocks in blossom! 'tis the month of May—
The Doctors' meeting is this blessed day,
And come what will, you know I heard you swear
You'd never miss it, but be always there!"

And so it is, as every year comes round
Old Rip Van Winkle here is always found.
You'll quickly know him by his mildewed air,
The hayseed sprinkled through his scanty hair,
The lichens growing on his rusty suit—
I've seen a toadstool sprouting on his boot—
—Who says I lie? Does any man presume—
Toadstool? No matter—call it a mushroom.
Where is his seat? He moves it every year;
But look, you'll find him—he is always here—
Perhaps you'll track him by a whiff you know—
A certain flavor of "Elixir Pro."

Now, then, I give you—as you seem to think
We can drink healths without a drop to drink—
Health to the mighty sleeper—long live he!
Our brother Rip, M.M.S.S., M.D.!